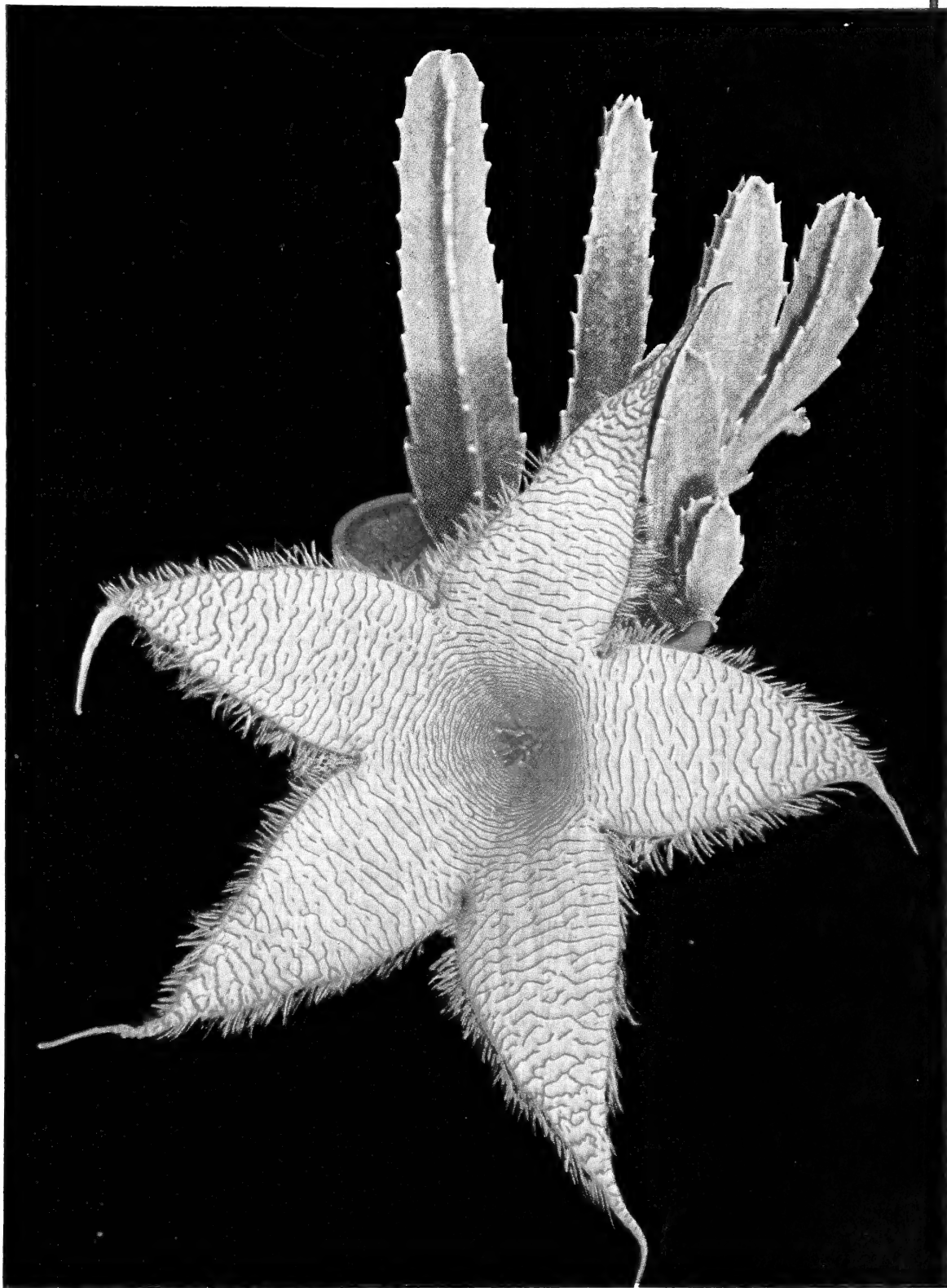


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GIANT STARFISH FLOWER - STAPELIA GIGANTEA

Diamond Jubilee

CACTUS HANDBOOK

1876 - 1951

JOHNSON CACTUS GARDENS

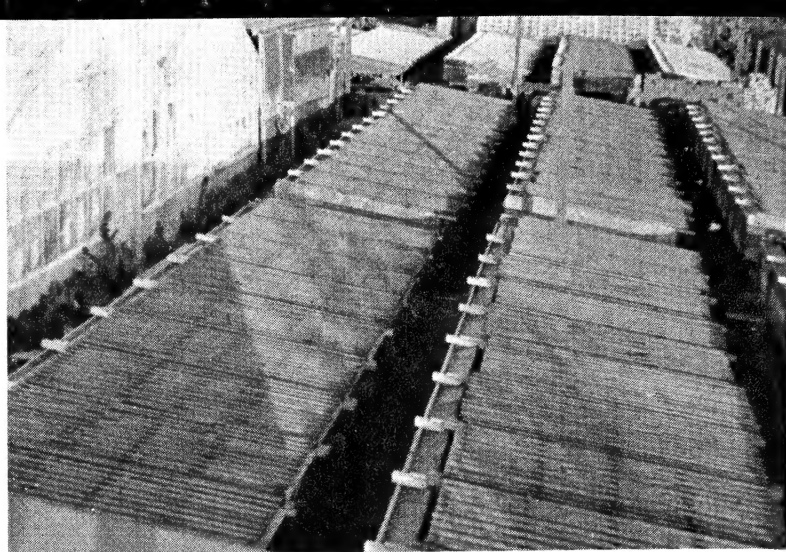
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PRICE 50 cents



SPECIMEN GARDEN AND LATH HOUSE

The cacti in our specimen gardens are maintained to give us data on growth characteristics, minimum temperature requirements, frost resistance and seed. Much is learned also by comparison with plants grown in frames and in flats. Lath houses provide shelter for succulents and epiphytic cacti which need some protection from mid-summer sun.



SEEDLING CACTUS FRAMES

After the small cacti have been replanted twice they are large enough to benefit by more light and air and are moved from the greenhouses to these raised, glass covered, cold frames. Here they are near the glass and luxuriate in the heat, intense light and free ventilation. This induces a vigorous root growth and early flowering maturity.

Diamond Jubilee CACTUS HANDBOOK

OUR desire has been to bring to the advanced collector a more comprehensive listing of our collection and more photographs of the various plants. It is still not practical to list more than those readily available.

Considerable thought has been given to nomenclature. We have used *The Cactaceae* by Dr. N. L. Britton and Dr. J. N. Rose as the basic authority. This four volume work was published in 1919-1923 and was the essence of twenty years of datum assembling and original critical analysis of this large plant family. It was my privilege to know both authors and to be encouraged by the great-hearted kindness of Dr. Rose who was a curator of the National Herbarium in Washington.

Since the publication of *The Cactaceae* much new data has been brought to light and many new cacti have been discovered. Of late years, in the light of this new data, several new revisions of the family have been proposed. The study of plant relationships (taxonomy) is not an exact science. The exact relationship of one plant to another in the course of evolution can never be more than one man's considered judgement. This must explain why a plant is moved from genus to genus or why a new genus is proposed. The changing of the specific names or substitution of one generic name for another is often due to another factor; the rules laid down and accepted by professional botanists at the various international congresses occasionally held. These rules are laid down

to take the personal bias out of decisions so that all must arrive at the same answer with the same data. This is slowly bringing order out of the chaos of the past 300 years but brings wails of anguish from the collector who must needs learn new names for old friends.

The principal authors consulted other than Doctors Britton and Rose were: A. Berger, T. Borg C. Osten, Curt Backeberg, W. T. Marshall, H. Bravo, P. Standley, E. J. Alexander, R. T. Craig and current literature. This leaves many important authors out but since the material with which I was concerned was amply covered by these workers other material would not have greatly changed the result.

Special mention must be given to the researches of Curt Backeberg of Germany. Mr. Backeberg collected extensively in South America and for the past 20 years has written voluminously on his findings. He has been particularly interested in bringing out the broader relationships. To do this he has created a multitude of new genera to bring the quaternary phyla into linear relationship. This is a great help to the serious student but unfortunately does not conform to present taxonomic practice. Thus the conflict created is purely one of philosophical concept and while one can always agree with Mr. Backeberg's intention he cannot conservatively always applaud the achievement.

The genera used in the following listings are those that for practical purposes have clarified for me rather than confused the issue. The specific names are as close as I can get from published data.

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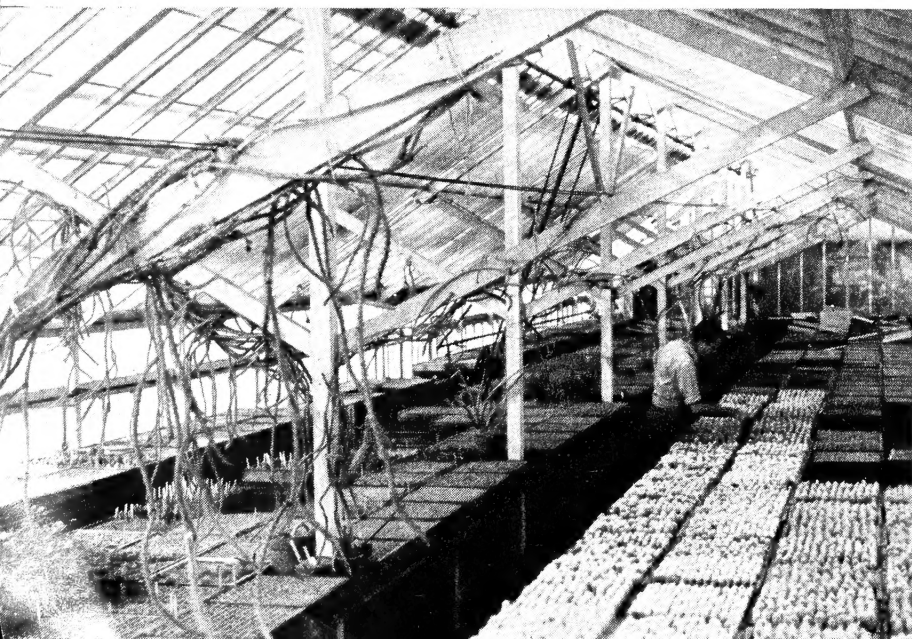
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VIEW IN SEEDLING GREENHOUSE

Most of our cacti are grown from seeds as only a few of the more robust growing kinds such as the Opuntiads and the few that offset as *Mamillaria fragilis* can economically be grown from cuttings. Though seeds germinate quickly the seedlings mature slowly generally taking about 2-3 years to characterize. Some of the *Cerei* etc. such as those used in dish-gardens or found in the dime stores may reach marketable size in a year. However most all the really desirable kinds take much longer to develop adult characters. Thus the *Echinocacti* start life bearing nipples like the *Mamillarias* and only later merge the nipples into their characteristic ribbed growth.



SPECIMEN CACTI AND GROWING FRAMES

Across the road is seen part of a block of growing frames in which three quarters of a million small cacti are growing. Until they reach salable size they require rather constant attention not because of their fragility but because they must have optimum growing conditions to reach the required size within the time limit of their price bracket, otherwise the grower sustains a loss. Cacti are sold on a very close profit margin.

THE GROWING OF CACTI

THE beginner in any field of endeavor is always at sea for until he has had some experience he has few points of reference. When he reads instructions he is liable to be quite annoyed at the author because of the generalness of the information. Just what does he mean by "moderate watering"? The author in turn is at a loss when he is asked, "How many ounces of water shall I give an Echinopsis and how often?" I have tried to explain what the result should be and the method we use to attain it and to explain the factors that you may meet with that influence the attainment. If one understands fundamentals, methods are less important and specific instructions even less so.

POTTING SOILS

IF YOU are just growing a few cacti and succulents in ornamental dishes you may pot them up in almost any local soil. If they are not overwatered they will do quite well. Often you can buy a peck of potting soil from your local nurseryman. He generally will have quite suitable soils. The following remarks apply only to the serious grower and collector and the beginner may well overlook them.

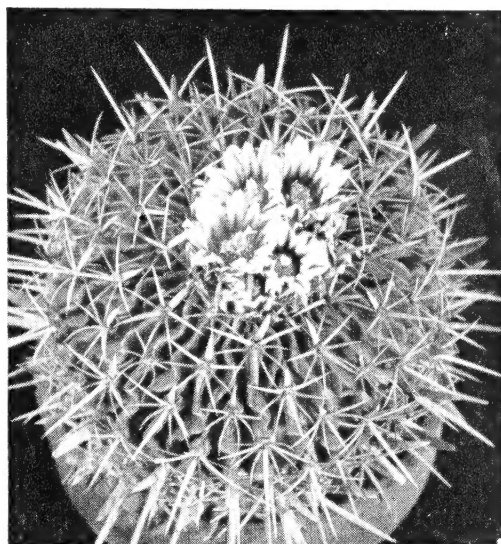
In mixing a cactus soil the principal aim should be to compose one through which water percolates reasonably fast. If after watering the water stands a few minutes before sinking in you may know it is considerably too "sticky". Sandy loam as a base is preferable. However in many parts of our country clay loams are predominant. Clay soils are composed of very fine particles and for best results should be loosened up with coarse sand and leafmold put through a $\frac{1}{4}$ " or $\frac{1}{2}$ " screen. Many growers are under the impression that good potting soils must be put through a fine screen but this is the opposite of the truth. Various things are used to break up sticky soils: Vermiculite, spongerock, brown peat moss are a few. They can be used successfully but my own preference is for leafmold, charcoal and coarse sand. Leafmolds vary greatly of course, depending upon the kinds of leaves used. The best leafmolds are from evergreen trees and shrubs, not conifers. Our sclerophyllous, western vegetation produces a very good quality of leafmold that does not break down too quickly.

The use of lime in the compost is recommended in regions of heavy rainfall. In dry regions it is not too important. Wet-country soils are liable to be on the acid side. Cacti and succulents are not too particular but seem to thrive best where the P. H. is not too low. A neutral or slightly alkaline soil seems to suit most species. Lime may be added as crushed oyster shells, washed eggshells or limestone chips. If we think soils are too acid we use hydrated lime in very small quantities.

The epiphytic cacti and many others will tolerate a slightly acid soil. A good rule of thumb is that those cacti which

have very strong, heavy spines or white spines are partial to a little lime. Also those with very hard, horny tubercles or ribs. All of these plants are found in quite dry and generally hot regions and the soils are not leached by heavy rains. Also these plants like a sandier compost and are less tolerant of overwatering.

An average good cactus soil may be made up as follows: 1 part loam, 1 part



STENOCACTUS

The Stenocacti are all very interesting and often handsome cacti. Their distinguishing characteristic is the great number of thin, narrow ribs. The flowers are all quite pretty and they bloom with great freedom in early spring. See page 18.

coarse sand, 1 part leafmold. If your loam is sticky add more sand. If the leafmold is blackish and powdery when dry, add more sand. A half part granulated charcoal is often helpful. If you want an alkaline soil add a handful of oystershells or limestone chips.

I have found that nursery raised plants do quite well in such a soil. Wild collected or imported Mexican plants often do much better in 2 parts coarse sand, 1 part leafmold with a scattering of charcoal. They will thrive in this for years. Such plants as Mexican Living Rock (Ariocarpus), Sand Dollar (Astrophytum), Pelocyphora, etc., like this treatment.

HOW TO POT CACTI AND SUCCULENTS

First select a pot of the right size. If the plant is of the ball type and under six inches in diameter use a pot just a little

Continued on page 48

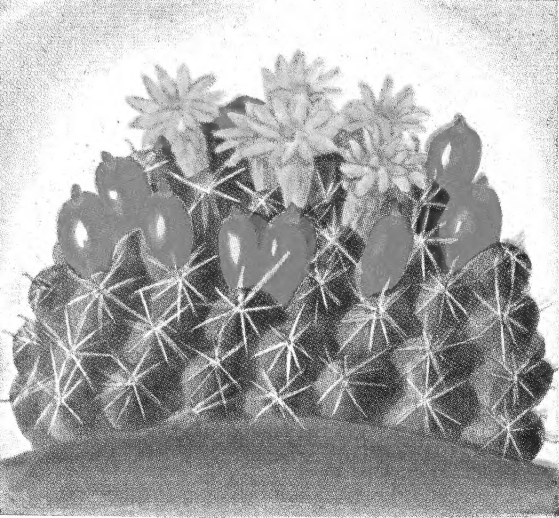


GROWING YARD

Larger plants are grown in "flats" (18"x18"x3" boxes) outdoors where they may receive the full benefit of direct sunlight under conditions which approximate culturally their native environment.

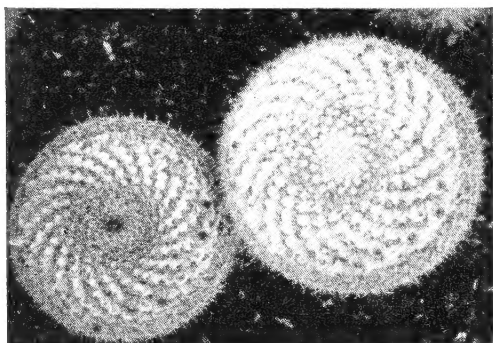
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CORAL CACTUS

The Coral Cactus is one of the prettiest of all with its circlet of bright red berries and charming cream colored flowers. The berries break through ripe and scarlet taking only a day or so to appear. Mamillaria Heyderi grows readily and fruits profusely. Mature 2-inch to 3-inch fruiting specimens. 50c and..... 75c and.....



DIADEM CACTUS

From November to spring the lovely Mamillaria Werdermanniana bears its bright pomegranate-red blossoms nestling in a snowy crown of fine wool. They always attract a great deal of attention from visitors to our gardens. They are solitary up to 3" in diameter and are easy to grow in any sunny window. Nice 1" and 2" 50c and..... 35c

GENERAL LISTING

Mamillaria albescens. Near *M. camptotricha*. Clustering with flexible, whitish spines..... 50c

Mamillaria albiflora. A form of *M. Herrerae*. 75c

Mam. angularis. A fine variety near *M. compressa* but larger and with more white wool. Flowers large, red 2" - 3" 75c. Smaller 35c and 50c

Mam. angularis longisetata. 1 1/2" - 2"..... 75c

Mam. aurihamata. A very pretty species near *M. bocasana*. The central spine varies from yellow to brown. Grows well. Like *bocasana* it has many white hairs. 1 1/2" - 2"..... 50c

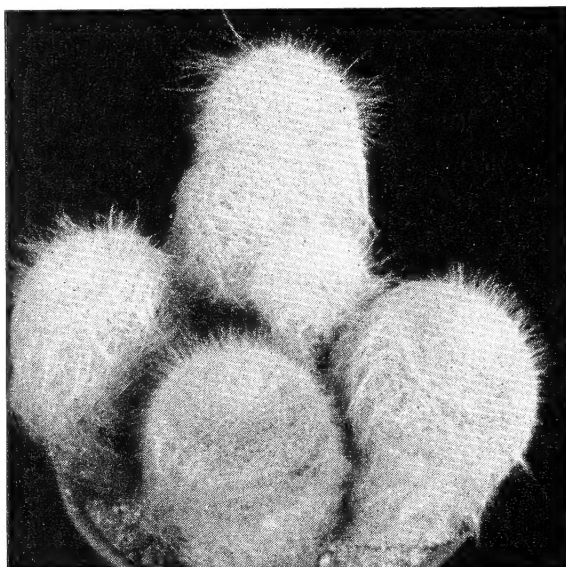
Mam. aureilana. Formerly known as *M. cephalophora*. A lovely small species with silky yellow hair. Flowers very large clear pink. Not the easiest to grow. Small flowering..... 75c

MAMILLARIAS OR PINCUSHION CACTI

ARE you familiar with the lovely Mamillarias? A collection of just this group alone will make a fascinating and colorful window garden. There are about 300 recognized species although almost 1000 have been described. Many species have innumerable forms as distinct in appearance as the species and these forms have been described by some botanists as species. The grower and collector, not too interested in the niceties of taxonomic distinctions, may do well to accept many of the synonyms as species. Otherwise he will miss many of the prettiest plants whose identity would be lost in an inclusive species.

The far greater number of Mamillarias (the technically correct spelling is Mammillaria) are native to the mountains and plains of Mexico. Many are found in the drier south and western states from Texas to California. Quite a number are found in Central America, Guatemala particularly, and south to Venezuela and Colombia in South America and the islands of the Caribbean Sea. They are widely distributed from the salty sands of the seacoast to six or eight thousand feet in the mountains. They may grow exposed on the mesas, seek shelter beneath the bushes, cling to the crevices of barranca walls or nestle indistinguishable amongst the pebbles, seen only when the rains bring forth their dainty blossoms.

They vary greatly in the color of their spines, some snowy white, others yellow, fulvous-red, black or grey. Some bear fine, closely interlocked spines so dense the green plant below cannot be seen, others have fish-hook centrals or stout, curved spines, some have fine, white silky hair, one bears eider down-like "feathers" in place of spines and some have stars of radial spines. Quite a few have charming blossoms and some bloom during winter. Some are solitary, others clustered and some form many headed mounds.



OLD LADY CACTUS

The long silken tresses of this superb species place it in a class by itself. The snowy white hair increases in thickness and length with age. Mamillaria Hahniana is always a show specimen and always attracts attention. Violet red flowers in December, January and February. It flowers outdoors with us even when temperatures are down to freezing. It is an easy species to grow, liking a light, airy position in the window. Flowering 3" specimens \$1 each. 50c and..... 75c and.....

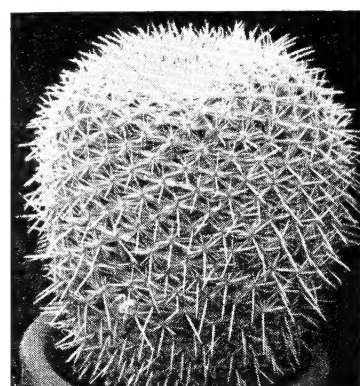
Mam. Bachmannii. A pretty species flowering freely and with much white wool in the areoles. Rare. 2" - 2 1/2" specimens \$1

Mam. Bertrandii. 1" - 1 1/2"..... 40c

Mam. bombycina. See illustration page 8.

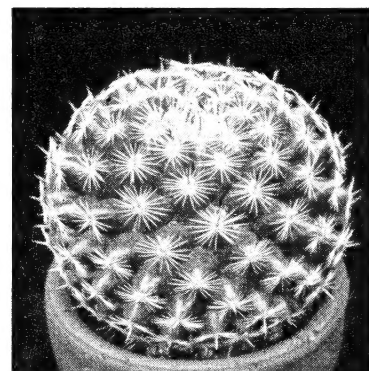
Mam. Brandegeei. A Baja California species with creamy-white flowers and flattened biscuit-like form. 2" - 3"..... 75c

Mam. Bravoae. A very pretty white spined species recently named by Dr. Craig. The flowers are deep pink nestling in the white wool of the flowering axils. 2" 50c. 1" each..... 35c



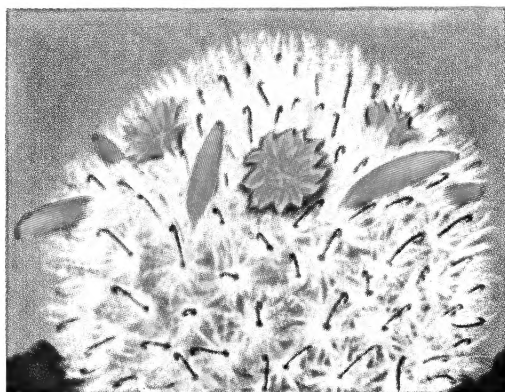
MAMILLARIA PSUEDOCRUCIGERA

A lovely plant with pure white very short spines and crowned with pink blossoms. The heads branch into two, three or four heads. 3" - 4" branched specimens \$1.25



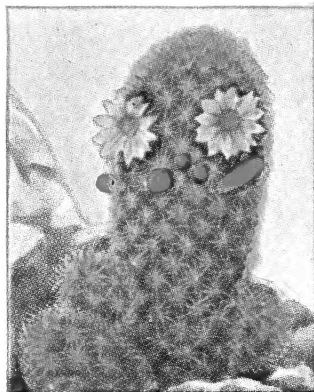
MAMILLARIA PERBELLA LANATA

Handsome white species. Pink blossoms. Nice bright plants, each..... 35c



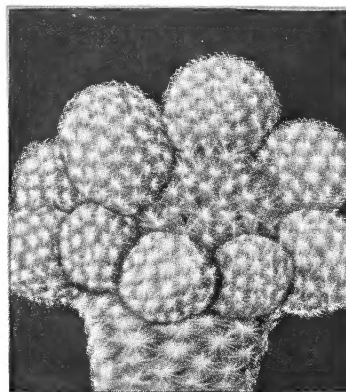
POWDER PUFF (Mamillaria bocasana)

Like a bursting cotton ball! Snow white hair instead of spines. Cream colored flowers and bright fruits. A jewel among cacti. Very easy to grow. 2-inch flowering specimens, 50c; flowering, 35c..... 25c



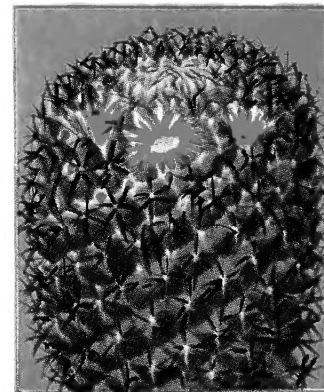
LADY FINGERS

A dainty gem. Mamillaria elongata Schmollii is a bright mosaic of golden, harmless spines. Small clusters, 35c. 25c Single heads.....



THIMBLE CACTUS

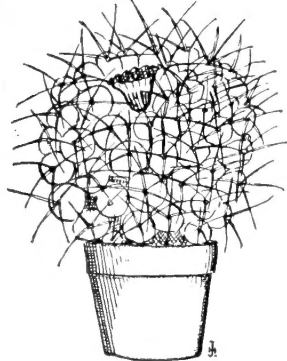
Like the "Old woman who lived in a shoe" Mamillaria fragilis has more children than she knows what to do with. Nice..... 25c



RUBY DUMPLING

Quick growing Mamillaria tetra-cantha has a hoary head from which the bright blossoms emerge. Nice plants, 35c and..... 25c

Mexican Jewel Collection No. Z1. The above 4 plants..... 90c



THE CULTURE OF MAMILLARIAS

MAMILLARIAS are among the simplest house plants to grow as they require no especial treatment. Most species do quite well in the window or greenhouse if given a light position and a moderate amount of ventilation when conditions permit. Like most cacti they are more liable to be killed by kindness than by neglect.

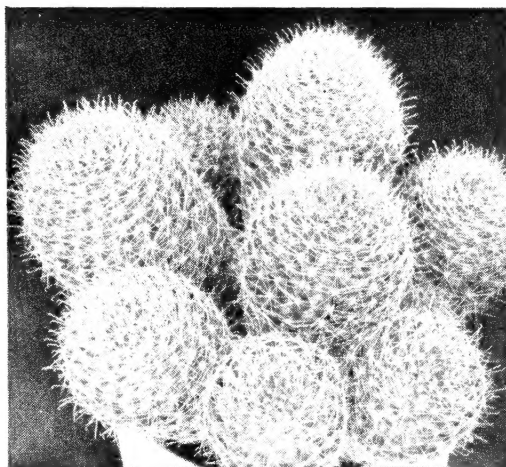
They do well in a loamy soil preferring sandy loams through which the water drains moderately quickly. A good soil mixture if your local, natural soils are sticky is 1 part loam, 1 part coarse sand or fine gravel, 1 part leafmold. If the loam you have is very clayey and sticky use more sand, up to two parts. Granulated charcoal is very useful also to relieve sticky loams. If you think your soils are inclined to be acid or "sour" they may be made alkaline by the addition of pounded eggshells or oyster shells or limestone chips. Cacti in the wilds are often very tolerant of lime some growing where "caliche" (a term used in semidesert regions for a sort of limey hardpan) comes almost to the surface. I have found however that even these species do well in an almost neutral soil.

When potting spread the roots out carefully and sift almost dry soil between them. See that the base of the plant is about flush with the surface and that the surface is about 1/2 inch below the rim of the pot. Tap the pot on the table and press with your thumb to firm the soil. I prefer not to water for a week or so unless very hot and dry. Then water just enough so the pots will be dry in 5-7 days. Water again when dry. Don't keep your plants wet. Let them dry out between waterings.

CACTUS FOOD

A very effective food for cacti with a good organic base, the ingredients of which are blended and proportioned to help your plants make normal, matured growth.

12 ounce bag. Post Paid.....50c
2 pound bag. Post Paid.....\$1.00



MAMILLARIA PYGMAEA

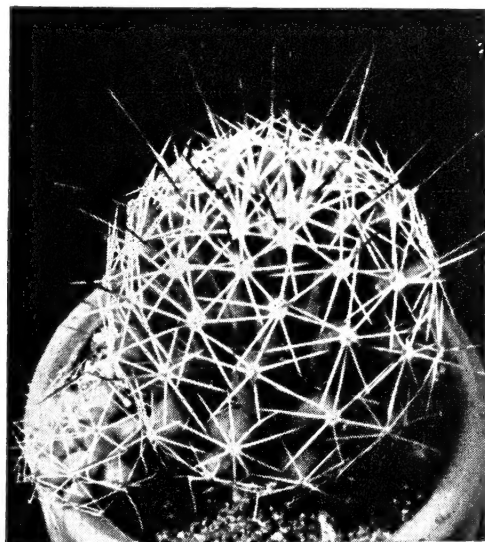
A quick growing small plant that flowers the first season. The blossoms are white and are soon followed by bright red berries. At first it is solitary but later forms a small cluster. It will stand some shade. Nice 3 years old specimens 50c. Smaller.....25c

Mam. Bullardiana.....35c

Mam. calacantha. A solitary plant with age reaching 3" in diameter and a foot in height. Nipples small, closely set and tipped with 25 to 35 yellow radial spines and 2-4 reddish centrals. A very pretty plant. Not common. Each.....25c

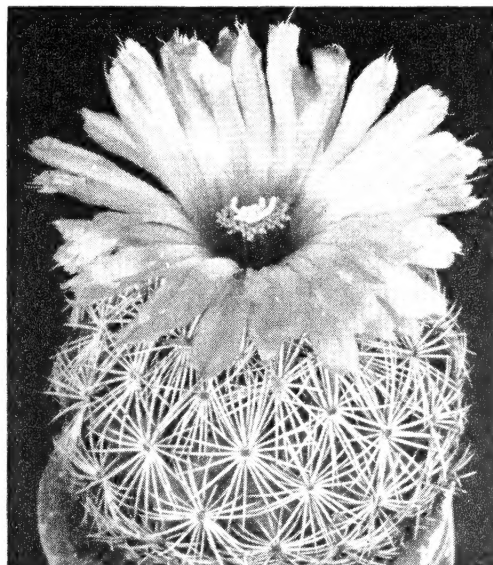
Mam. camptotricha. See page 6.

Mam. caput-medusae. Flowers pink.....35c



GNOMES PINCUSHION

A very satisfactory variety that flowers when quite small. Mam. decipiens branches profusely soon being almost smothered in youngsters. Very easy to grow and flower. The young plants may be detached and root up quickly. Large 50c. Nice.....25c



CORYPHANTHA RADIAN

The Coryphanthas are allied to the Mamillarias but quite generally bear much larger flowers. Several of the bright yellow blossoms are borne each season. They grow easily but slowly, requiring the same care as Mamillarias. The nipples are larger and fewer with a groove on the upper surface. Flowering plants.....75c

Mam. carnea. A vigorous, bright green plant with pyramidal, angled nipples and 4-5 stout spines but lacking radials. Flowers pink. A free bloomer. 2" 50c, 1-1 1/2".....35c

Mam. Celsiana. See page 7.

Mam. centricirra. Page 8.

Mam. compressa. See page 7.

Mam. dealbata. Page 9.

Mam. dumetorum. A form of M. Schiediana. 40c

Mam. ebenecantha.....35c

Mam. echinaria. A very pretty plant closely allied to M. elongata, but with 1-2 centrals. Golden yellow spines, it soon forms handsome clusters. Give it a quite sandy soil. 2" - 3" 35c

Mam. elegans. A very popular variety with very numerous small nipples tipped with 20-30 chalk-white radial spines and 2-4 centrals tipped brown or black. Flowers red from January on. Large flowering 3" 75c, 1 1/2" - 2" 50c

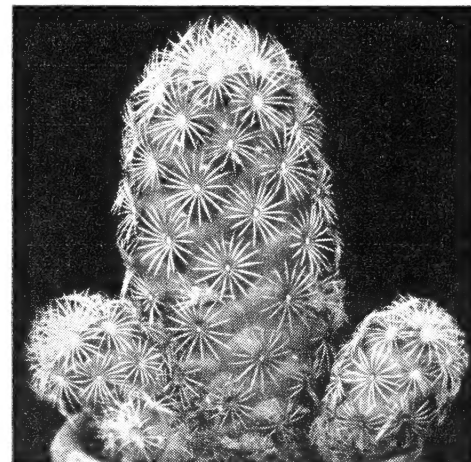
Mam. elegans potosina. A larger form. 2 1/2" - 3".....\$1



ROSE PINCUSHION

The bright and charming Mamillaria Zeilmanniana is one of my favorites. It is a very heavy bloomer and remains in flower for many weeks. The plants are small 1" to 2" in diameter but rapidly form clusters branching from the base. The smallest plants will bear several flowers. Grows well in sun or partial shade. 75c, 50c and.....35c

Mam. elongata Schmollii. A miniature form of M. elongata with more slender stems and fine radial spines generally paler yellow in color. It flowers during January, February and March and again later in the year. Branches very freely. An elegant small specimen plant as perfect as a jewel. 2" - 2 1/2" branching 35c. Single.....25c



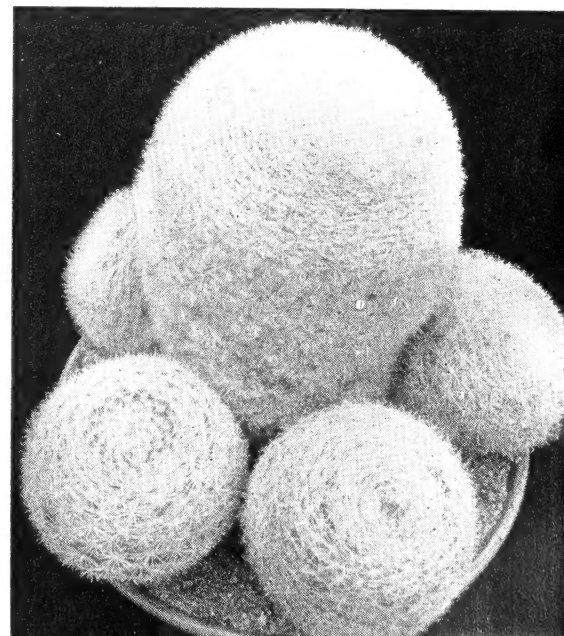
GOLDEN STARS

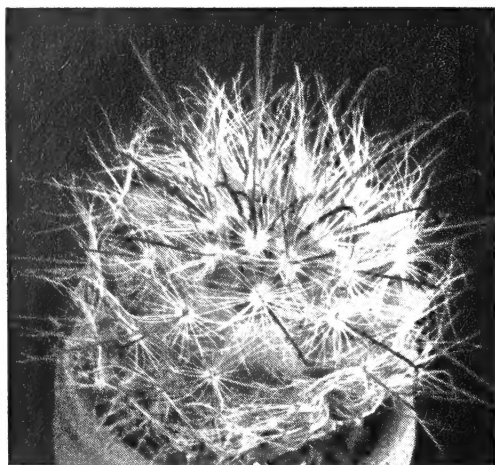
The lovely popular Mamillaria elongata should be in every collection. Each nipple tipped with a shining golden star the nipples arranged in perfect spirals. Very easily grown. Branches freely from the base soon forming handsome specimens. Early spring bloomer with red berries. Sun or partial shade. 3" - 4" branched 50c. Small clusters 35c. Single.....25c

SNOWBALL PINCUSHION

Mamillaria candida

An exquisite plant of purest white the tips tinged pink at times. The nipples are tipped with over 50 white radials and up to a dozen centrals. The plants may reach 4" in diameter and 6" tall and often have several heads in a cluster. They prefer a quite sandy soil and should not be overwatered. Give them a sunny place in the window. 1 1/2" - 2".....50c





COTTON CACTUS

Mamillaria longicoma is covered with woolly white hair arising from the axils between the nipples which are tipped with 25 or more hair-like radials. One of the 4 central spines is hooked. Flowers are pinkish-white followed by long, curving, red seed pods. Likes a light place in the window. Will take shade if not overwatered. Flowering 2" specimens 50c. Smaller flowering..... 35c

Mam. elongata tenuis. A smaller plant than *M. elongata* and pale straw-yellow in color. Very neat and pretty with yellow flowers in February and later red berries. Small clusters. 35c. Singles..... 25c

Mam. formosa. A fine, solitary plant making attractive specimens. Nipples thickly set, tipped with 20 - 25 chalk-white radials and 4 - 6 centrals, flesh colored with black tips. Flowers pink. Bright carmine-red fruits. 1"..... 35c

Mam. fuliginosa. A quick growing species with dark spines and pink blossoms. Flowers freely. The flowering crown bears white wool. Specimens 5" to 6". \$1. Smaller..... 25c

Mam. fragilis. Page 4.

Mam. fragilis minima. Page 8.

Mam. fragilis prolifera...... 25c

Mam. Galeotii. A very pretty plant and one that grows quickly into a large specimen. Nipples large and few, tipped with long, yellow, flexuous spines. Flowers orange-red followed by long, dark red fruits. Nice plants 2" - 2 1/2" each..... 50c

Mam. gigantea. A very large flat-topped species with stout, recurved central and 12 short fine radials. Flowers pale yellowish followed by purplish-pink fruits. 2" 50c. 1" 35c

Mam. Hamiltonehoytae. Grows to a very large size. Plant solitary, flat-topped with few, angled nipples tipped with 5 - 8 radials and 2 - 3 long centrals. At flowering the axils are filled with white wool. Blossoms red, in January and February. 2" - 3" flowering specimens..... \$1

Mam. Haseltonii. A white haired species often with a tinge of yellow, related to *M. Hahniana*. Like *Hahniana* it makes a fine specimen. Rare. Each..... 50c

Mam. Herrerae. Plants look like golf balls! Small and pure white. Quite rare and very attractive. 1" - 1 1/2" \$1

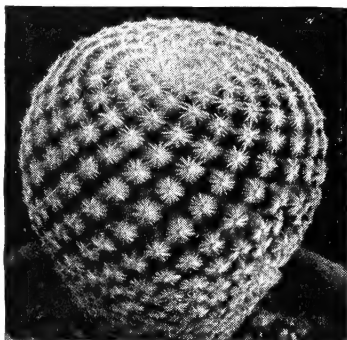
Mam. hidalgensis. A tall growing species with many nipples tipped with 2 - 4 centrals with radials often lacking. The flowering crown is filled with white wool among which the bright carmine flowers make an effective display. The fruits are dark carmine. A quick grower. Nice. 35c

Mam. Hoffmanniana. Page 9.

Mam. Johnstonii. A rare species and not too easy to grow. Likes a very sandy soil and not too much water. Each..... 75c

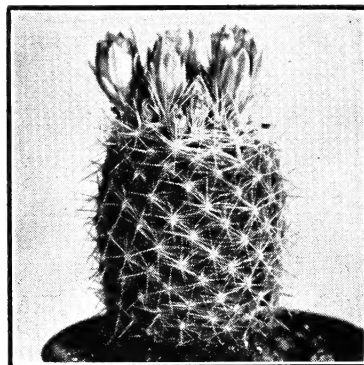
Mam. Karwinskiana. The heads of this species fork, eventually forming a rounded mound. Nipples large and angled, tipped with 4 - 6 stout, radial spines. Flowers creamy white, petals with carmine midline. 2" 50c. 1" - 1 1/4"..... 35c

Mam. Kelleriana. A recently described species with many nipples terminated with 6 dark brown radials and sometimes 1 central. Flowers bright magenta. Fruit scarlet. 2" 50c. Smaller..... 35c



Mamillaria psuedoperbella

As a small plant this is very pretty with its neat rows of tiny nipples tipped with 20 - 30 pure white radials. Flowers carmine-red. Hand-some plants 1" - 1 1/2"..... 35c



ESCOBARIA CHAFFEYI

Small free flowering plants with cream colored or pinkish flowers. Flowering size..... 35c

Mam. Micheana. A very pretty species with pale yellow spines. Stems simple but much branched from the base with the same habit as *M. elongata*. Very choice. 1 1/2" - 2"..... 50c

Mam. melanacentra. A strong growing, vigorous plant with large pale, blue-green, angled nipples tipped with one long, black central and 7 - 9 blackish radials. Flowers bell-shaped, deep pink and quite large. 3" \$1. 2" 50c. Small..... 35c

Mam. microhelix. A very handsome solitary species with each nipple surmounted by a star of 50 bright yellow radial spines and on younger nipples 1 - 2 erect centrals, red to brown. Flowers cream often tinged pink. A lovely plant that should be in every collection. 50c and..... 35c

Mam. microheliopsis. Similar to *M. microhelix* in color and habit but with 6 - 8 centrals and 30 - 40 yellow radial spines. Very pretty and elegant. 1" 25c

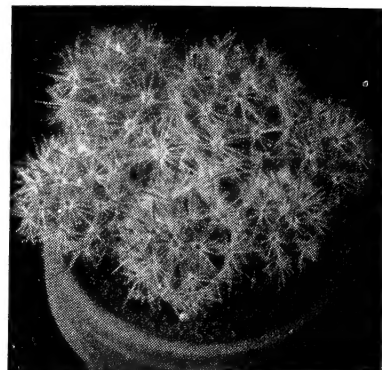
Mam. neopotosina. A handsome plant, flattened-globose with short nipples tipped with 40 - 50 fine radials and 4 - 6 centrals. The plant is pale yellow with dark red flowers. Each..... 35c

Mam. Nunezii. Plants solitary with small nipples tipped with 2 - 4 centrals and 25 - 30 slim radials. Plant appearing pale yellow. Flowers dark rose. A quick grower and attractive. Each..... 35c

Mam. Parkinsonii brevispina. A shorter spined variety of *M. Parkinsonii*. Very pretty white spined plant. Each..... 35c

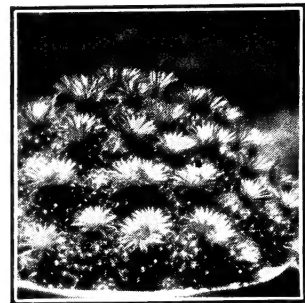
Mam. pentacantha. A variety imported from Cadereyta. 35c

Mam. phaeacantha. A fine, quick growing plant, dark green with dark brown to black spines. White wool at flowering axils. Red flowers. 2" - 3" — 50c and..... 75c



GRAPE CACTUS

A dainty, tiny cactus bearing an endless number of "pups" each one of which will grow. *Mamillaria multicaps* grows easily in sun or shade. Yellow flowers and scarlet fruits. Clusters..... 25c



Mam. Kunzeana. A clustering species with white, hair-like radials and 3 - 4 centrals the lower hooked. Flowers cream to pink. Seed pods red. 2" 50c. Nice..... 35c

Mam. Lesaunieri. A bright, fiery crimson flower. Plant dark green. Central spines 1 - 4 radials 11 - 13. 2" - 3" 75c

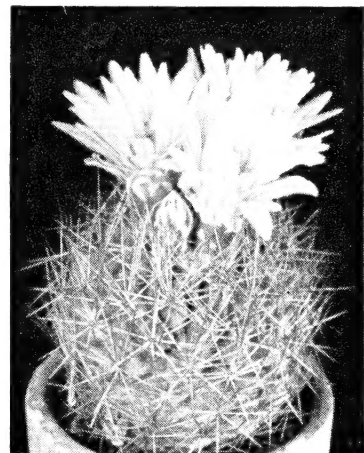
Mam. Lloydii. Plants flat-topped with short nipples tipped with 3 - 4 radials. Flowers pale pink. Each 1 1/2" 40c

Mam. macracantha. The plant we have under this name has bright red flowers and short ovoid, angled nipples. Very pretty when in flower with its white wool. 3" 75c. 2"..... 50c

Mam. magnimamma. A lusty grower with short, angled nipples and 3 - 5 stout, recurved radials. Flowers cream colored followed by fat, bright crimson fruits. Each..... 35c

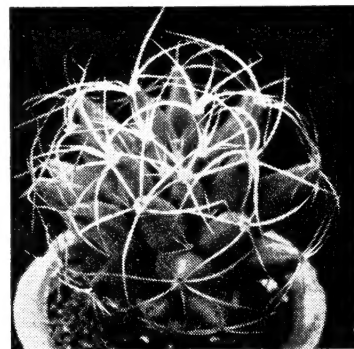
Mam. mazatlanensis. Each..... 50c

Mam. multicaps. A small, much branched plant with cream flowers, scarlet fruits..... 25c



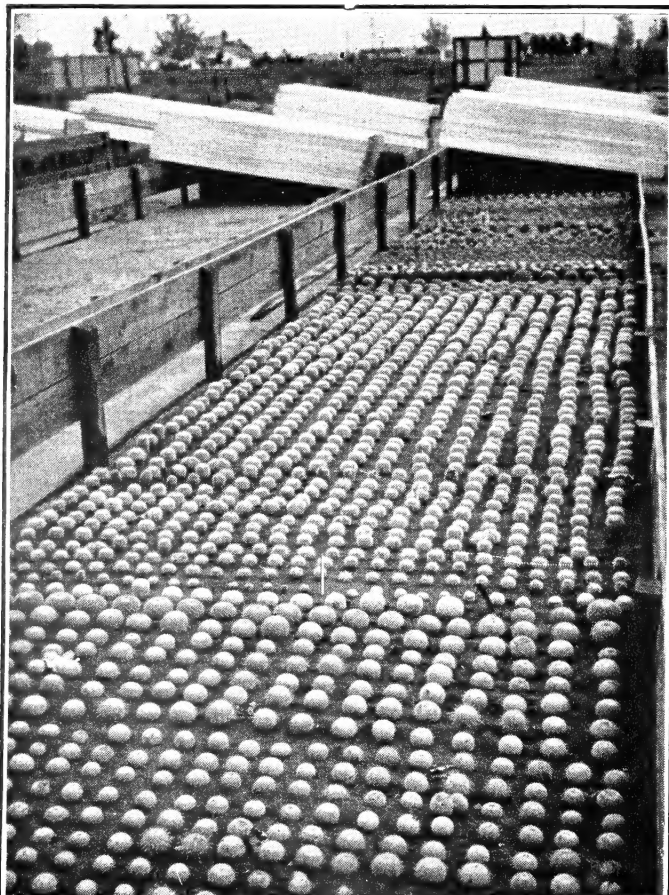
CORYPHANTHA ECHINUS

A plant from western Texas with pale pink or white flowers in this respect not conforming with *C. echinus*. Nice flowering specimens. Each 3" - 4" 35c 75c. Smaller.....



BIRDS NEST

Feathery curling yellow spines that are papery, soft and harmless. The plant is much given to clustering. *Mamillaria campotricha* grows well in sun or shade. 2" each 50c. Nice 35c and..... 25c





MAMILLARIA CELSIANA

An attractive species with yellow spines each nipple with a woolly axil. Flowers bright, red-pink. With age it forms most beautiful, large clusters. Though it grows easily it is not a common plant. Each.....

35c

Mam. phymatothele. Plants solitary, fast growing, dark green with dark spines. Flowers bright red nestling in a crown of white wool. An attractive, easily grown plant. 2" - 3" 60c. Smaller.....

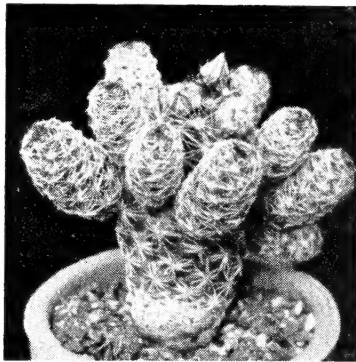
25c

Mam. polyedra. Rare.....

50c

Mam. polythele. A quick growing species with 1 - 5 centrals tipping each nipple. Flowers bright rosy carmine. Easily grown. Each.....

25c



MAMILLARIA FRAGILIS PROLIFERA

A new Thimble cactus with dark central spine, pinkish flowers and an abundance of youngsters. Quite distinct from the others and of very dwarf growth. Like them each one of its numerous progeny will root even if left lying on the soil. Each.....

25c

Mam. plumosa. Feather Cactus. This is certainly one of the most remarkable of cacti. The spines have lost their normal identity and have become feathered on the margins. They are snowy white and soft and completely obscure the plant beneath. Each.....

\$1

Mamillaria Pringlei columnaris. 5" each \$1.25

Mamillaria perbella. Cylindric plants closely packed with small nipples and short white spines. Very attractive with the nipples arranged in 13 and 21 spirals. The axils bear white wool and carmine-red blossoms. Each 35c

Mamillaria pygmaea. Page 5.

Mamillaria pyrrocephala. Flame Pincushion. One of my favorites because of its almost constant blooming habit. The flowers are quite large and of a very brilliant, deep crimson. I have had it flower at almost every season. Flowers when small, 2" - 2 1/2" 75c. Nice plants 35c

Mam. ocotillensis. A rare new species. Flattened globular body. Centrals 1 to 3, radial spines 2 - 4. 2" - 75c Smaller.....

Mam. rhodantha. Page 8.

Mam. rhodantha chrysantha. Page 9.

Mam. rhodantha rubra. A short spined variety. 1" 35c

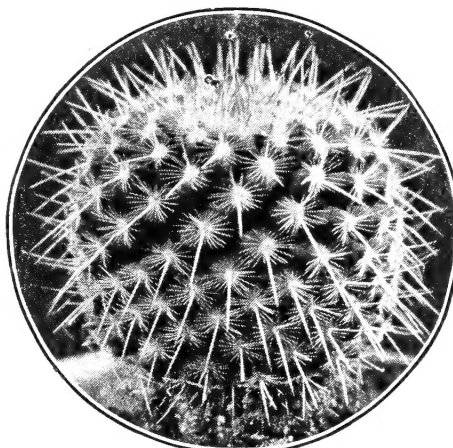
Mam. rhodantha sulphurea. Page 9.

Mam. Ritteriana. Plant simple, globular. Central spines 1 - 2 brown to black, radials 18 - 20 pure white. Flowers white, striped pink. Fruit red. Each.....

35c

Mam. saetigera. Globose-flattened. Axils with white wool, central spines 2, radials 15 - 20, flowers white with rose stripe.....

35c



OWL'S EYES

A well known plant to fanciers Mamillaria Parkinsonii has snowy white spines and should be in every collection. It branches by forking the heads dividing into 2 - 3 or 4. In mature plants the lower central spine becomes quite pronounced. Handsome 50c and.....

35c

Johnson's Vitamin B1 Tablets

FOR USE IN ANY SOIL

Works miracles on cacti often bringing refractory plants into bloom. Particularly valuable to stimulate new root growth after transplanting.

New double strength tablets. Bottle of 75 tablets.....

50c



OLD LADY CACTUS

Mamillaria Hahniana

Another view of this superb species. The long, white hair increases in length and thickness with age. It is a winter blooming species the bright violet-red blossoms being most effective against the white hair. A fine show specimen always attracting attention. At first solitary it eventually forms a cluster. Easy to grow liking a loam soil with plenty of sand and leaf-mold, moderate waterings and a light or sunny position. A mountain species sometimes seen growing in the cornfields of the Mexicans. Flowering 3" specimens \$1 each. Smaller 75c and.....

50c

Mam. Sheldonii. A rare species from southern Sonora. Like most of the Sonoran and Baja California Mamillarias it is impatient of too much water. Flowers large and beautiful pink 2" - 4" 75c and.....

\$1

Mam. Schelhasei. A hooked spined species with some white wool. Flowers white with rose mid-line. 1" 35c

Mam. Schiedeana. One of the very choice species and very scarce. The tiny, conic nipples bear up to 75 hair-like radials, golden yellow in color. Very attractive. Small each.....

50c

Mam. Schmollii. See page 8.

Mam. Seideliana. A rare and attractive hook-spined species. Centrals 3 - 4, lower long and hooked. Radials 18 - 25 straight. Flowers yellow to white. It quickly branches and forms nice clusters. 75c and.....

50c

Mam. sempervivi. A flattened, globular species with numerous small nipples, short brown spines and pink flowers with darker stripes from wool-filled axils. Each.....

35c

Mam. Shurliana. A rare new species from Baja California. Mature collected plants.....

75c

Mam. sonorensis Hiltonii. A variety of this very variable species with large, brilliant carmine-red blossoms. Nipples large, quadrangular, bluish green. Late winter bloomer. 75c and 50c

Mam. spinosissima. A very handsome species with spines ranging from white to ruby red. Plants solitary, columnar the spines so dense as to almost hide the plant. Should not be over-watered. 75c and.....

50c

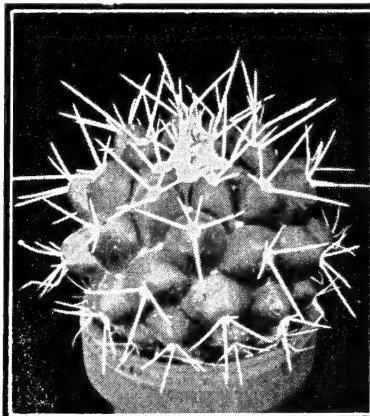
Mam. sphacelata. A rare cespitose species 50c

Mam. supertexta. A variety of M. elegans with very small nipples and tiny spines. A charming white plant with pink flowers. 2" each.....

75c

Mam. tetracantha. A large, quick growing species freely producing its pretty red blossoms from the woolly white axils. 4" - 5" \$1. 2 1/2" - 3" 50c. Smaller.....

25c

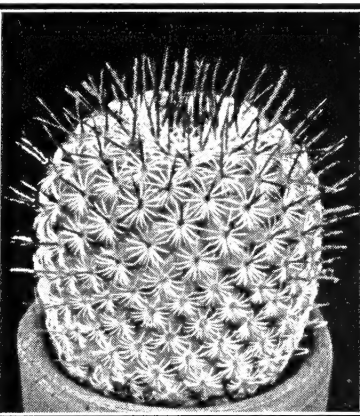


MOTHER OF HUNDREDS

Mamillaria compressa

A pretty variety with dark central spine, pinkish flowers and an abundance of youngsters. Quite distinct from the others and of very dwarf growth. Like them each one of its numerous progeny will root even if left lying on the soil. Each.....

35c

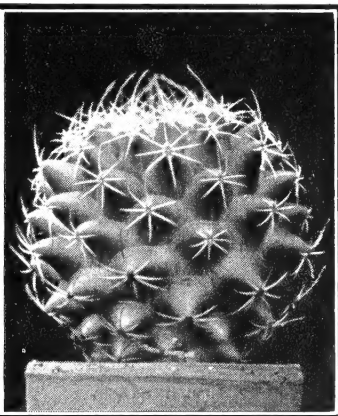


VAUPEL'S PINCUSHION

Mamillaria Vaupelii

One of the prettier of the solitary, richly colored Pincushions. Beautiful when the sun is shining through the glossy spines! The plants may reach 2" - 3" in diameter with a tawny golden sheen. 1 1/2" - 2" - 50c

Smaller..... 35c



PINCUSHION

Mamillaria Kewensis

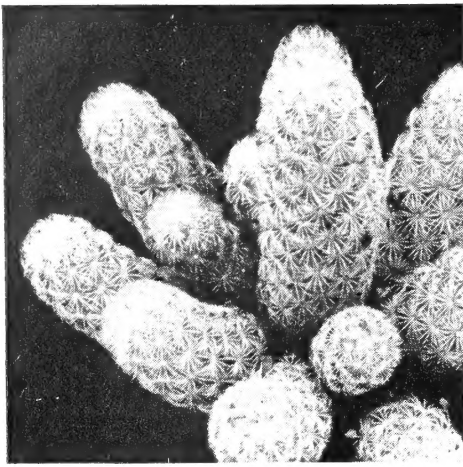
A rapid growing species of solitary habit soon forming a most attractive flowering specimen. It will reach almost a foot in height. When flowering the upper axils are filled with white wool in which are the freely borne, crimson flowers. 1 1/2" - 2" 50c. Smaller 35c and.....

25c



CACTUS WINDOWS

A view of two windows in the living room of Mrs. Fredenna Stump of Ligonier, Indiana. As may be seen Mrs. Stump grows her plants very well. She has been most pleased with the orders received from us.



LADY FINGERS

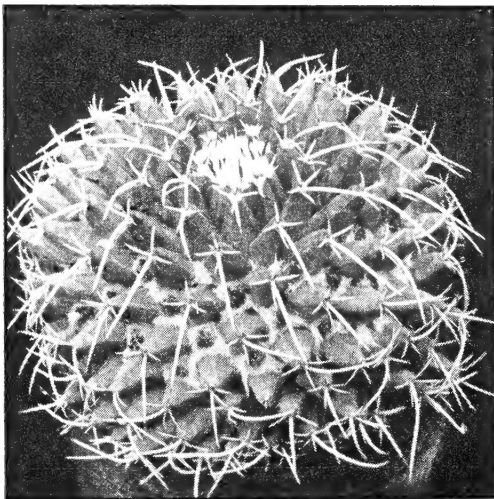
One of the daintiest of all *Mamillaria elongata tenuis* has bright yellow spine clusters tipping each nipple. Branches very freely from the base. Blooms in February and March and also later in the season. Well grown specimens will have scores of arms which maintain their clear, pale yellow color for many years. Often produce 5 - 10 arms the first season. Nice 35c and..... **25c**

Mamillaria trichacantha. A very pretty and free flowering species. The plant branches freely the dark green nipples bearing chestnut brown spines, the lower hooked, the radials 15 - 20, brown. Flowers white in spring and summer. 1 1/2" - 2" **50c**

Mam. Trohartii. A distinct variety of *M. phymatothela* with large nipples tipped by 1 - 2 centrals and 3 - 7 radials. Flowers deep carmine red. Very attractive. 2" - **50c**. Smaller **35c**

Mam. uncinata. A fine species, flattened-globular with large nipples tipped with one heavy, hooked central spine and 4 - 7 radials. Flowers white with pink mid-line followed by large, fat, brilliant scarlet fruits. Very pretty. 1" to 1 1/2" **35c**

Mam. Vaupelii. See page 7.



BIRDS FOOT PINCUSHION

Mamillaria centricirra is a lusty species from the high tablelands of Mexico. It grows to quite a large size the plant flattened-globose. Our plants are quite different from *M. magnimamma*. Flowers cream, striped pink followed by carmine fruits. Single heads, may reach 3" - 4" in diameter and with age form clusters. 3" - 4" - \$1.25. 1" - 1 1/2" **35c**

Mam. viperina. A rare species, very slender, at first upright but later creeping. At first it might be taken for *M. elongata* but is quite distinct. 1" - 2" each..... **75c**

Mam. Waltheri. A flattened globular species with many nipples. The plant appears fulvous yellow. Flowers pinkish white and are freely borne. Each..... **35c**

Mam. Webbiana. From central Mexico. Stems solitary, cylindric the axils with wool at flowering. Large 1 1/2" - 2" each **50c**

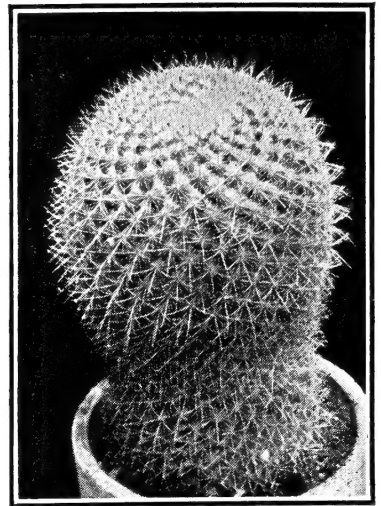
Mam. Winteriae. Plant flattened globular. Nipples large, 4-angled bluish-green. Central spines none, radials 4. Flowers pale yellow to white. Each..... **35c**

Mam. Zahniana. Plant simple, depressed-globose with large, deep green nipples, keeled ventrally, tipped with 4 short, stout radial spines. Flowers pale yellow. Makes a nice specimen plant. In the wilds during the dormant season it is almost flush with the ground. 1 1/2" - **50c**. Smaller **35c**

Mam. Zeilmanianna. See page 5.

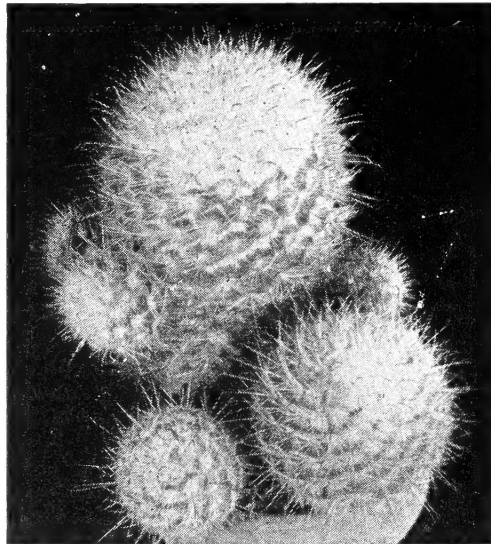
Mam. zephyranthoides. A rare species of not too easy culture. Plant flattened-globose with large, few, soft green tubercles tipped with 1 hooked central and 12 - 18 hairlike radials. Flowers large, white with carmine stripe. Small **50c**

Mam. Zeyeriana. A dark-spined, globular plant with pale, bluish-green tubercles tipped with 4 long, acicular, chestnut brown central spines the upper perfect. Radial spines about 10. Flowers red-orange with yellow margin to the petals. 1 1/2" - 2" - **50c**. Smaller..... **35c**



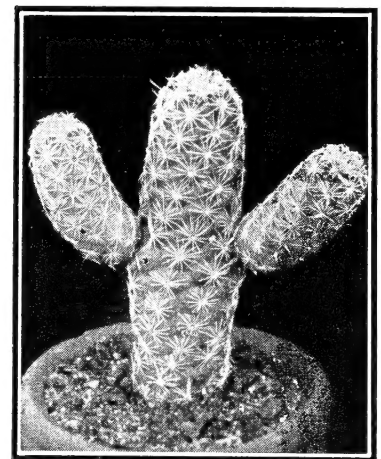
RAINBOW PINCUSHION

A popular plant *M. rhodantha* varies greatly in color from pale yellow to dark red. Flowers are bright red. Grows quickly and easily. 3" - **75c**. Smaller 2" - **50c**. Nice **35c** and..... **25c**



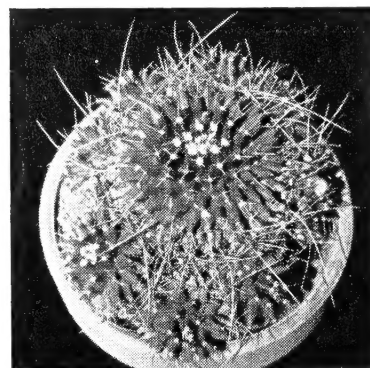
SILKEN PINCUSHION *Mamillaria bombycina*

Perhaps the loveliest of all *Mamillarias*. Certainly one of the most sought after. Its handsome, lacy spine pattern is exquisite in its perfection. It is a fish-hook variety bearing quantities of white wool and pretty pink flowers. 2 1/2" - 3" \$1.50. Smaller \$1 **75c** and.....



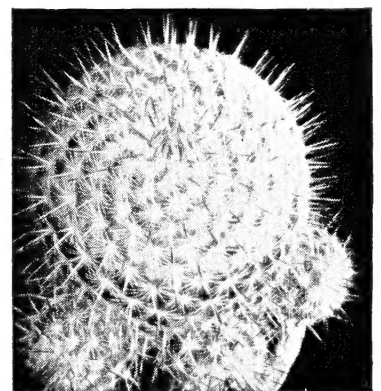
JELLY BEANS

A cute variety of the Thimble cactus. *Mam. fragilis minima* bears many branches..... **25c**



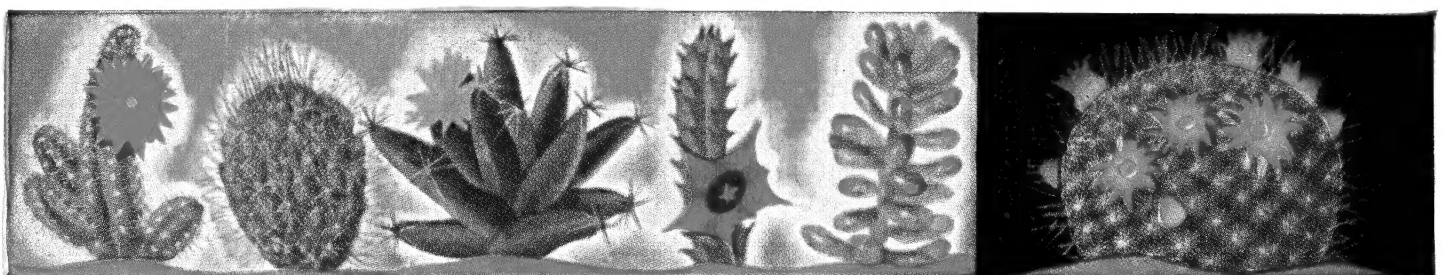
MAMILLARIA BUCARELIENSIS

A newly introduced species with 4-angled nipples tipped with 2-4 centrals, brown, the lowest heavy and straight. Radials 3 to 5. Flowers deep pink. A good grower. 1 1/2" - " - **50c**. Smaller..... **35c**



MAMILLARIA SCHMOLLII

A fine form of *M. elegans*. Soon branches. Spines pure white with central tipped black. Flowers pink. Charming. **50c** and..... **35c**



PEANUT CACTUS
Nice plants. **25c**

PINCUSHION
Pretty. **25c**

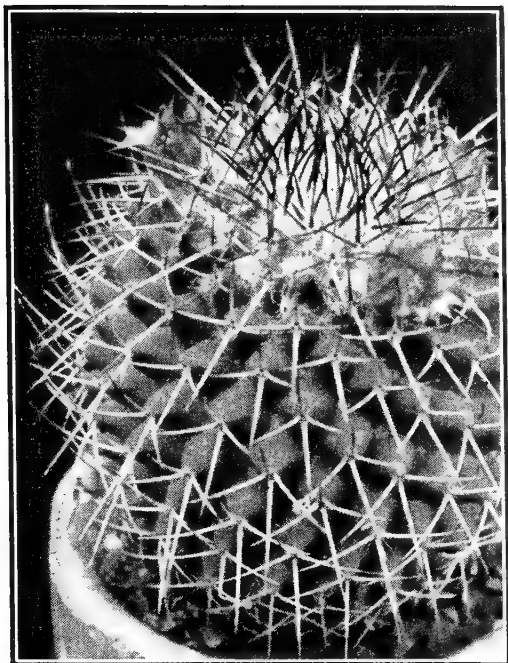
BIRD'S NEST
Yellow spines. **35c**

**RED DRAGON
FLOWER**
Curious. **25c**

XMAS CHEER
Red Tipped. **25c**

FLOWERING PINCUSHION
Handsome carmine red flowers. **25c**

CURIOSITY COLLECTION No. Z2. The above 6 plants. You will enjoy planting this attractive group in a pot or bowl for a cheerful breakfast nook. All six..... **\$1.10**



MAMILLARIA PHAEACANTHA

A fine species that grows rapidly, flowers freely when not much over one inch tall. White cotton is borne in the axils at flowering time a pretty foil for the dark red-pink flowers. Thrives in a light window and is not at all choosy in its requirements. **35c**
2" — 50c. 3" — 75c. Smaller.....

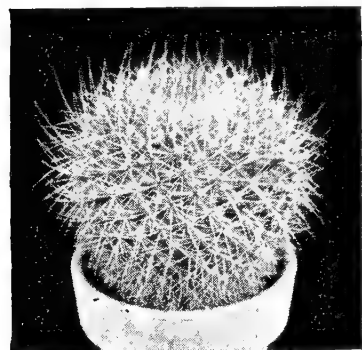
DOLICHOTHELE

A genus close to Mamillaria differing in the size of the tubercles and that they are not arranged in two spinal series. The flowers are also larger and always yellow.

Dolichothele longimamma. Long, soft, green tubercles. Each..... **75c**

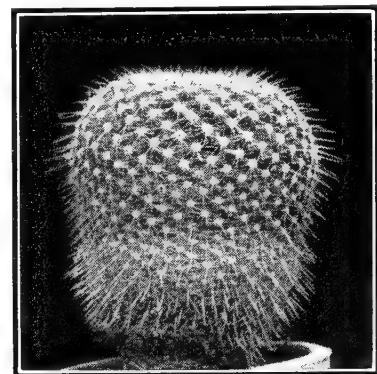
Dolichothele Ludwigii. A very large species up to 3" or more in diameter. Each small.... **\$1**

Dolichothele sphaerica. See page 6 for illustration. A fine species with butter yellow blossoms. Stands considerable cold. **35c** and..... **25c**



Mamillaria rhodantha chrysacantha

Tawny yellow spines and nice red flowers. A fine specimen plant. 2" — 50c. Smaller..... **35c**



MAMILLARIA MARTINEZII

Handsome pale, tawny yellow spines. Crown bears white wool the older axils none. Flowers red-pink in February and March. Makes a charming specimen plant. Nipples small bearing very short spines. Large specimens, **\$1**
\$1.50 and.....



MAMILLARIA DEALBATA

A very pretty plant with white spines. Red flowers from December to late spring. Easy grower soon forming clusters. 3" - 4" — **\$1**
2" - 2½" — 50c and..... **75c**

CORYPHANTHA

This genus differs from Mamillaria in having grooved tubercles (nipples) and flowers borne at the base of the young tubercles and, in general, having much larger flowers. The fruits are green, very mucilaginous; seeds mostly large and always brown.

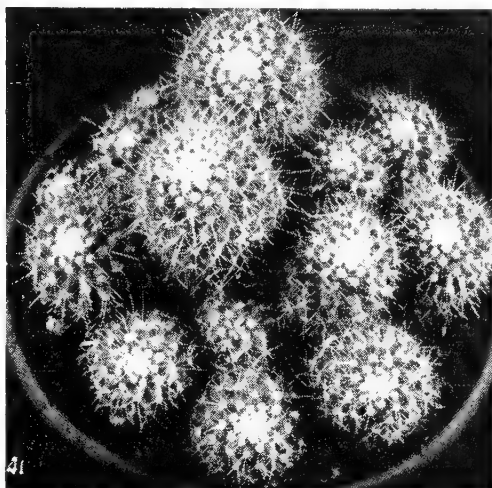
Culture. Same as Mamillaria but often larger pots are required as many have long, thick tap-roots. If roots become very large they may be cut back to within an inch or so of the plant base, the plant dried a couple of weeks and rerooted. Generally they like a sunny location. They bloom quite freely during summer.

Coryphantha Andreae. Small plants..... **35c**

Coryphantha asterias. Small..... **35c**

Coryphantha Bergeriana. Small..... **35c**

Coryphantha bumamma. A large growing species with very large, rounded nipples. Flowers bright yellow. Each..... **50c**



YELLOW PINCUSHION

Mamillaria rhodantha sulphurea has pale, clear yellow spines and becomes a very handsome specimen. It is a quick, easy grower and does very well under a great variety of conditions. Flowers are red and borne during late spring. Each nipple is tipped by clusters of long, curved spines. At first solitary later clustering. Nice plants. **35c**
50c and.....

ESCOBARIA

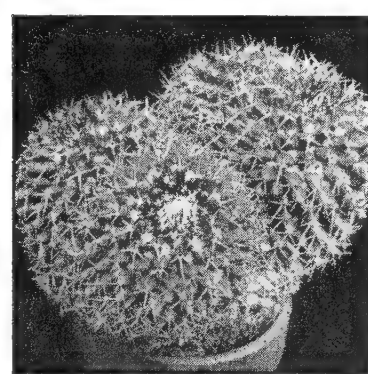
The Escobarias look much like Mamillarias but bear their flowers at the base of the young tubercles. Tubercles grooved, fruit red. Culture as in Mamillaria.

Escobaria tuberculosa. Pictured at left. An interesting plant with white spines, branching from base. Flowers pink. Mature plants..... **35c**

Escobaria strobiliformis. Whiter and finer spines. Much branching. 1" each **25c**

Escobaria Roseana. Golden yellow spines. 1" each **40c**

Escobaria Chaffeyi. White spined. See page 6 **35c**



MAMILLARIA KARWINSKIANA

A splendid species with dichotomously branching, deep green heads and cream colored flowers with a pink stripe down each petal. Club shaped scarlet berries. Easy to grow. 2" — 50c. **35c**
Smaller.....



FISH HOOK PINCUSHION

An extremely free flowering species Mamillaria Wildii is always a favorite. The spines are harmless, one tiny hooked one tops each nipple. Flowers quite freely during a long period in the summer. The small, red seed pods are very bright. Grows and flowers in sun or shade. Sandy soil with moderate waterings. Large 4 years old flowering plants 2½" - 3" **25c**
each 75c. Smaller.....

Coryphantha clava. A tall growing species clustering with age. Flowers pale yellow in summer. Large plants 5" - 8" **75c** to..... **\$1.50**

Coryphantha difficilis. Small..... **35c**

Coryphantha durangensis. 3" - 4" **75c.** Small **35c**

Coryphantha erecta. Handsome golden yellow spined species. Short nipples tipped with 8 - 14 radial spines, 2 centrals. Makes handsome clusters. 5" — **75c.** 2½" - 3"..... **50c**

Coryphantha Georgii. A free flowering species with almost white flowers. Blooms when small. 3" - 4" — **75c.** Small..... **35c**

Coryphantha gladiispina. Small..... **35c**

Coryphantha macromeris. A long-nippled Texas species with large purple flowers. Large **40c**

Coryphantha macrothete. Long nippled, cluster forming Mexican species..... **35c**

Coryphantha Poselgeriana. Small..... **35c**

Coryphantha radians. Photo page 5

Coryphantha raphidacantha. 2" - 3"..... **50c**

Coryphantha scolymoides. Very large yellow flowers. Small..... **25c**

Coryphantha Vaupelii. Small..... **35c**

NEOLLOYDIA

A small genus from Texas and northern Mexico. Tubercles grooved, flowers mostly purple-red, large. Fruit bearing few scales.

Neolloydia texensis. Forms small clusters. Flowers very bright..... **35c**

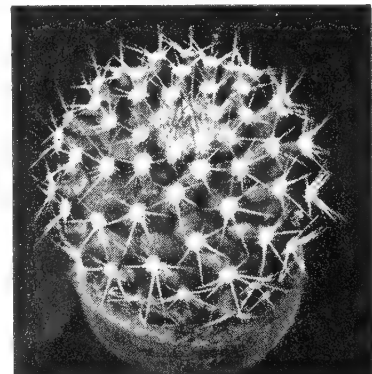
COCHEMIEA

A distinct genus with scarlet, elongated, zygomorphic flowers. Tubercles not grooved. Fruit naked. Culture; very well drained soil and care in watering. Sunny location.

Cochemia maritima. Rare..... **\$1**

Cochemia Poselgeri. Rare..... **75c**

Cochemia setispinus. Rare..... **50c**



MAMILLARIA HOFFMANNIANA

A pretty species with pink tinged spines. With age the crown becomes hoary white and during summer a continuing circle of light red flowers push out through the soft white wool. **35c**
2½" - 3" **75c.** Smaller.....



MEXICAN LIVING ROCK

This curious cactus could hardly look less like a living thing. It is a thrill to see the dainty, lovely pink blossoms suddenly appear among the horny tubercles. *Ariocarpus fissuratus* has a tough, leathery skin through which the underlying green shows faintly. The top of the plant is filled with grey wool. Give it a very sandy soil or pure sand with some leafmold and place in a sunny window. Water only when dry. Large mature flowering specimens 2-inch and 3-inch, each 75c, and..... 50c

ASTROPHYTUM

This Mexican genus though it has only a few species contains some of the most widely known and grown kinds. They are extremely satisfactory growing well under many kinds of treatment. They characterize when very small and their odd, graven forms and the freedom with which most bear their cheerful blossoms ensure them a place in every collection.

Culture. They need an open sandy soil and a very light or sunny position. Moderate waterings when dry.

***Astrophytum asterias*.** Sand Dollar. Page 18.

***Astrophytum capricorne*.** See Page 11.

***Astrophytum capricorne major*.** A supposedly larger form. 50c and..... 35c

***Astrophytum capricorne minor*.** A smaller form. 50c and..... 35c

***Astrophytum capricorne senilis*.** The spines of this variety are quite papery, long and curling varying from straw color to black. The flowers are large up to 3" in diameter rich golden yellow the silken petals stained with red at the base. The plants are variously mottled with grey-white patches. Three years old each..... 50c

NOTOCACTUS MAMMULOSUS

This favorite has handsome, bright yellow flowers. Surprisingly floriferous and easily grown. Enjoys light loam, moderate waterings. Sun or light position. Nice 2-inch, 2½-inch, 75c. Smaller, 50c and..... 35c



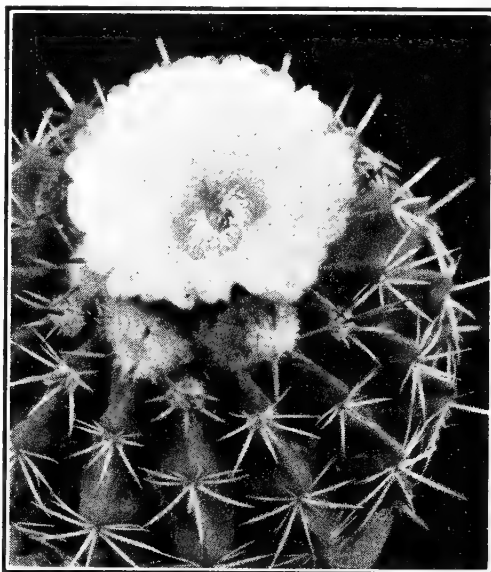
THIS large group of cacti is a very fascinating one to the collector. I have included here also members of the Echinocereanae as they are mostly of the globular type of stem. The exigencies of catalog building prevent one at times from adhering to a strict botanical interpretation. Those included are *Rebutia*, *Lobivia*, *Mediolobivia*, *Echinopsis*. From the *Coryphanthanae*: *Ancistrocactus*, *Thelocactus*, *Pelecypora*, *Solisia*, etc.

The plants are found from the Canadian border south to Patagonia. Only *Cactus* (*Melocactus*) is found in both North and South America. Some of the genera are widely distributed, others are quite local. Some are quite distinct in character while many, through gradations, merge into one another as *Lobivia*, *Rebutia*, *Echinopsis* and *Trichocereus*. Thus one can always find plenty of material for argument.

As the illustrations show there is a great diversity in the appearance of the plants and in their flowers. Many have strikingly beautiful blossoms, brightly colored and of many hues the petals often like satin or crumpled silk. Mostly they are not gigantic plants but small from the size of a walnut to that of a large orange though a few with great age become columnar to the height of a man. Most have ridges though some bear tubercles or the ridges are divided into "chins." The flowers are generally borne from the central areoles which distinguish them from the Echinocereanae which flower from lateral or side areoles. In most cases the flowers are regular or wheel-shaped though a few South American genera have zygomorphic or irregular flowers. A great many new plants have been found in the past 20 years and many more are to be expected as new regions are opened up for travel.

EPITHELANTHA

Small pure white plants with tiny nipples and short white spines. The blossoms are borne on the young nipples and are followed by clavate red fruits. *Epithelantha micromeris*..... 35c



COLUMBIAN BALL

Malacocarpus Vorwerkianus is a small, flat-topped, deeply ridged plant seldom exceeding 3 inches in diameter. Flowers sulphur-yellow with satiny petals. Flowering size 4 years, 1½-inch, 2-inch..... 90c

***Astrophytum myriostigma*.** Bishops Cap. Illustrated Page 14.

***Astrophytum myriostigma coahuilensis*.** A white variety generally of smaller growth than the type. 1½" - 2" — 75c and..... \$1

***Astrophytum myriostigma columnaris*.** A very distinct, tall, slender variety. A quick grower. 50c and..... \$1

***Astrophytum myriostigma tetragona*.** 4-sided Bishop's Cap. A most interesting variety coming from seed. 1½" — 50c. 2" — 75c. Smaller..... 35c

***Astrophytum ornatum*.** Star Cactus. A handsome species flecked with white the ridges with stout, curving, yellow spines. Flowers large, scented, lemon yellow. 2" — 50c. Smaller..... 35c

***Astrophytum ornatum Mirbellii*.** More heavily white-flecked than the type. Nice. 50c

AREQUIPA

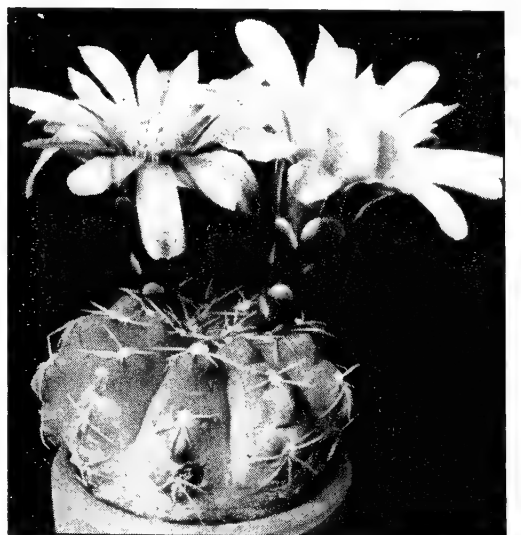
A small distinct genus from southern Peru chiefly around Arequipa a beautiful city, 8,500 feet at the foot of the volcanic cone of 19,000 foot El Misti. Globular to cylindrical plants with tubular, zygomorphic, red flowers with scaly, hairy tubes. Nearest Oroya and Matucana.

***Arequipa leucotricha*.** Beautiful fine white spines. 2" - 2½"..... \$1.25



LOBIVIA HERTRICHIANA

A small growing plant 2" - 3" in diameter and height, forming clusters. Flowers freely in the spring. It is found near Cuzco, Peru. Very easy to grow and will stand a considerable degree of cold. Flowering size clusters 75c. Smaller 50c and..... 35c



GYMNOCALYCIUM VENTURIANUM HYBRIDS

These lovely forms of *G. Venturianum* are exquisite. They vary in flower color from pale pink to scarlet and crimson and are truly as pretty in blossom as any cacti I know. Like many Chin Cacti they flower for months during spring and summer. Very easy to grow, liking sun or a light situation. Moderate water. Flowering 1½-inch-2-inch, 75c and \$1. Smaller flowering..... 50c

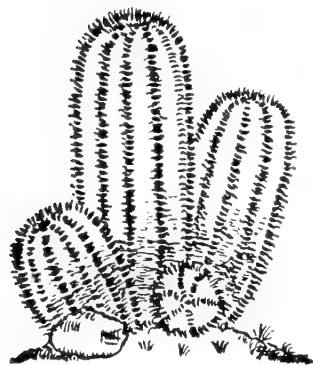
CACTUS

BARREL CACTI

CULTURE:

WITH such a very diverse group only general rules can be given. However almost all of them can be grown under practically the same conditions with very slight changes of routine. We grow them all together in the same frames and flat-yards allowing a little shade here or a bit more water, or perhaps missing a watering now and then for those intolerant of too much water. The same compost is used for all. Even in a window garden you will find considerable variety in exposure, enough so the thoughtful grower can arrange his plants to the best advantage. It is often surprising what a small shift in position can sometimes do for a plant. A little closer to the glass or perhaps a foot away from it, to the right or to the left of the window, a shelf at the middle or one at sill level; all have different possibilities and effects on your plants. Don't expect great changes in a few days but a little experimenting will show you what to expect from each situation.

A soil the same as for the Mammillarias will do nicely. Water when dry, never saturate them unless perhaps the plants are pot-bound. They should dry out in less than a week. When planting see that the base is about flush with the soil. If the base is deeply covered you are courting disaster. Newly planted specimens should be allowed a week or so without water to allow the roots to heal. More plants are ruined by kindness than neglect!



RED CROWN

The Rebutias are a very lovely group of small cacti and bear very vivid blossoms. Rebutia senilis has bright red blossoms and produces quantities of them. I have seen specimens with almost 100 open at once! The plants are clothed with tiny white spines and are attractive at all times. Moderate to generous waterings. Large 1½-inch-2-inch, 50c.

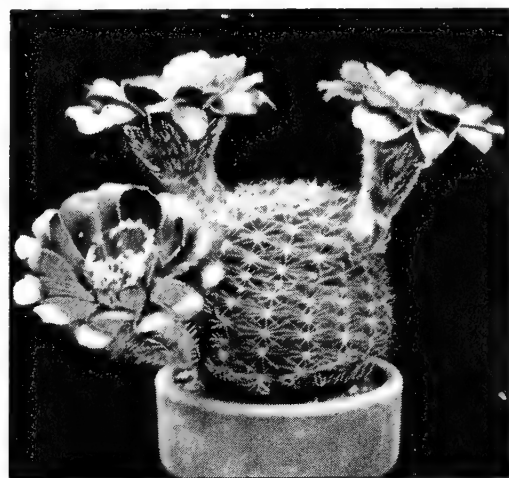
Nice specimens 4 years..... 35c

ERIOSYCE

A Chilean and Argentine genus of Echinocactus-like growth and red campanulate flowers. Seed pods spiny.

Eriosyce Korethroides. An Argentine plant with yellowish spines. Very scarce. 3"-4" \$3.50

Eriosyce Bruchii. In habit like Echinocactus Crusonii but up to 50 ribs. Rare. 1" - 2". Each \$1 and 75c



LOBIVIA BREVIFLORA

A very free flowering species the bright red blossoms appearing in late spring. The buds are clothed with brown wool. Likes a sunny location. 3", 6 year old plants \$1.50. Smaller flowering \$1. 1" plants..... 25c

LEUCHTENBERGIA PRINCIPIS

A strange Mexican plant more like an Agave than a cactus. Very long, slender nipples tipped with papery ribands from which the flowers appear. Rare and curious. 50c and..... 35c



ECHINOPSIS LEUCORHODANTHA

A charming small species that blooms very freely at intervals during spring and early summer. Flowers white with a trace of pink. Blossoms when quite small. Sun or shade with moderate to generous waterings. Very easy to grow and to flower. Large 3 to 4 years old, 2"-2½", \$1. Smaller 50c and..... 25c

ARIOCARPUS

An extremely slow growing group from Mexico bearing horny tubercles instead of ridges. The flowers are very pretty, white or violet-red. They come from very arid regions. They are best potted in sand with some leafmold added. Do not overwater. Limestone chips or crushed oystershells are helpful to add to the compost.

Ariocarpus fissuratus. Page 10.

Ariocarpus furfuraceus. A fine large species with short triangular acute, grey green tubercles the axils with much wool. Flowers white to pink. Large flowering specimens each.....\$2

Ariocarpus Kotschoubeyanus. A handsome smaller species with flat top and hardly raised tubercles with wool in axils. Flowers bright violet rose. Mature flowering.....\$1.25

Ariocarpus Lloydii. A large and distinct variety of A. fissuratus. Mature flowering.....\$1.50

Ariocarpus Macdowellii. A variety of A. Kotschoubeyanus. Mature flowering each \$1.25

Ariocarpus retusus. A large, flat-topped species with very short, triangular tubercles. Flowers pale pink. Large flowering each.....\$2

Ariocarpus scapharostrus. A distinct species long, erect, grey-white triangular tubercles. Flowers violet-rose. Flowering each.....\$2



ASTROPHYTUM CAPRICORNE

The handsomest flowered of this genus. Blossoms 2 inches and 3 inches in diameter, richly colored. The plants are very attractive with spiralled ribs, spineless or with few curling papery spines. Plant body dotted or mottled with patches of white, rayed scales. Flowers when small. 3-year-old plants 50c and..... 35c

NEOPORTERIA

(Chilena)

This genus as now understood contains many fine plants of rather diverse relationships. It is a poorly defined group and needs much more field work. It is closely related to Pyrrhocactus, Malacocarpus and Notocactus. It was erected by Britton and Rose and the original characterization was very loose. Plants globose to cylindric with tubercled ribs; short-funnelform pink or red flowers; scaly, wool and bristle bearing tubes and ovaries. Fruit dehiscing by a basal pore. All Chilean.

Neoporteria atrispina. Ready in 1952.....40c

Neoporteria accutissima. Long funnellform, pink flowers. Very spiny. Flowering 2½" - 3" 75c

Neoporteria castanioides. Rare. 2" each.....\$1

Neoporteria fusca. Ready 1952.....40c

Neoporteria heteracantha. Very lovely pink flowers in early spring 2" - 2½" flowering \$1. 1½" - 50c. 1".....35c

Neoporteria napina. 1952.....75c

Neoporteria nidus. Ready in fall. Small.....\$1

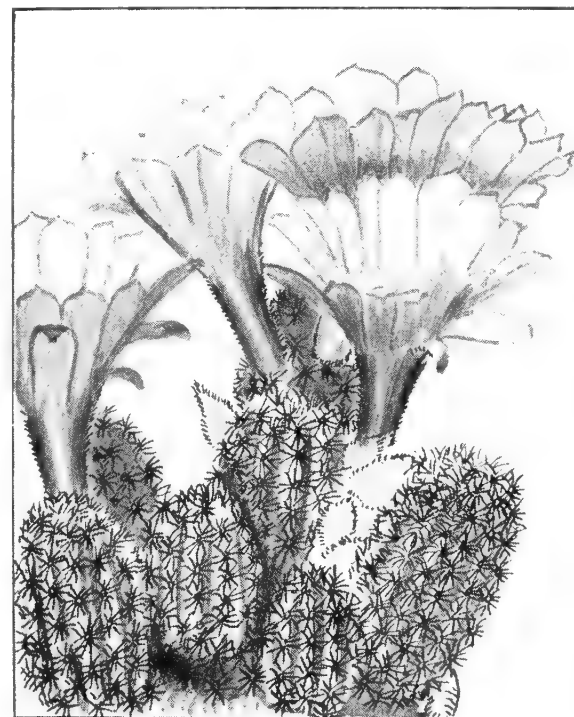
Neoporteria nigricans x heteracantha. 1952. 50c

Neoporteria nigrihorrida......35c

Neoporteria subgibbosa. Handsome globular plants with lovely pink flowers. 2" - 3" - \$1. 1½" - 2" - 50c and.....75c

ORANGE COB CACTUS

The vivid blossoms of Lobivia famatimensis are a startlingly beautiful sight. Petals like crepe de chine in all shades of yellow, orange and red. Full sun, moderate waterings. 2-inch and 3-inch, 1". Smaller..... 50c





VIOLET SEA URCHIN

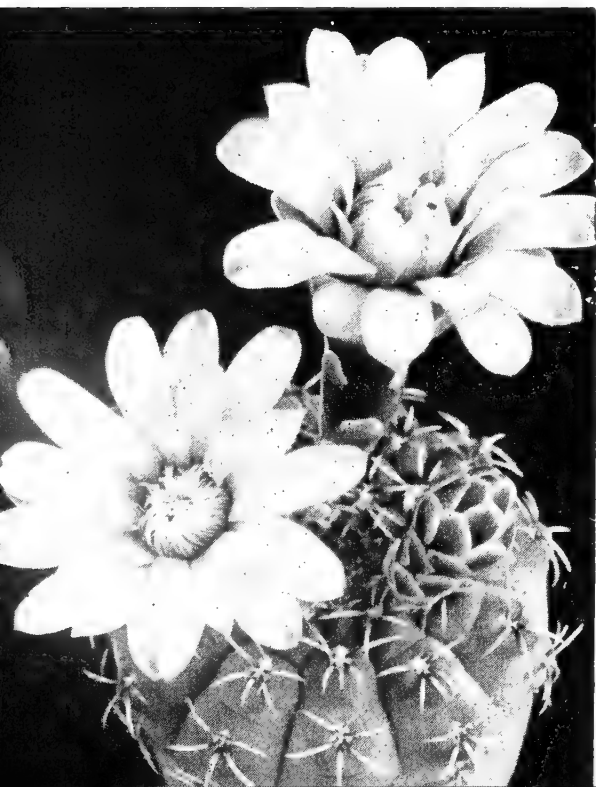
A lovely flowering small cactus reaching the size of an orange and flowering freely during spring and summer. The blossoms of *Acanthocalycium violaceum* are particularly bright and shining and the color is most pleasing. Flowers when small, the number of blossoms increasing yearly. Native to Argentina. Grows easily, liking a sunny or light position and moderate waterings. 3-inch and 3½-inch, \$1.25; 1½-inch and 2-inch, 50c to 75c. Smaller 1-inch..... **35c**

ECHINOPSIS

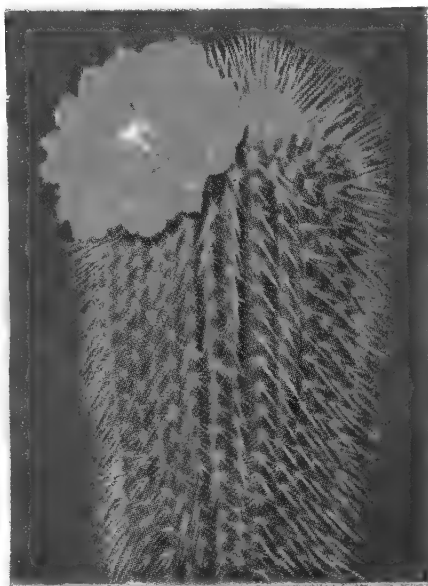
The plants in this genus are among the most satisfactory and handsome in bloom of all cacti. The blossoms of all are quite large opening in the evening and remaining open till late morning or, on cloudy days, all day. Plants globose to cylindrical; ribs continuous or chinned; flowers lateral, funnelform, often with a very long tube; perianth segments generally spreading, white pink, orange pink to dark red; flower tube, ovary and fruit with scales, the axils hairy. Argentina, Brazil, Bolivia. Closely related to *Trichocereus* and *Lobivia*.

CULTURE. Most are vigorous, strong rooted plants and like a porous, rich, loamy soil and ample water during the growing period. They will take a moderate amount of shade.

- Echinopsis Bridgesii.** 2"..... **75c**
- Echinopsis calochlora.** A really handsome plant bright apple-green with few short, yellow spines and charming white blossoms. Very attractive. 2" - 3" — **75c**. Smaller **50c** and **35c**
- Echinopsis campylacantha.** 1" - 1½"..... **35c**
- Echinopsis Eyriesii.** 1" - 1½"..... **35c**
- Echinopsis Huottii.** Grand white flowers Large..... **\$1**
- Echinopsis Kratochviliana.** Small growing with many short-tubed, snowy-white blossoms the tubes with much black, woolly hair. 2" - 3" — **\$1**. Smaller..... **35c**
- Echinopsis leucantha.** Page 15.

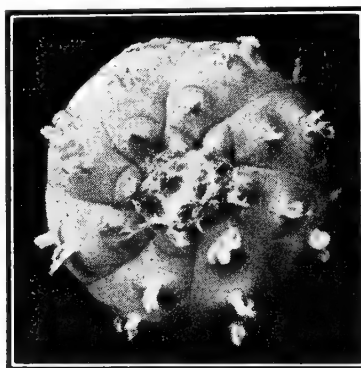


- Echinopsis nigra.** A rare, heavy spined *Lobivia*-like species. 1½" - 2½"..... **75c**
- Echinopsis obrepanda.** A globular Bolivian species with heavy chins and lovely large white blossoms. 3" - 4", 5 years old handsome flowering specimens..... **\$1.25**
- Echinopsis obrepanda amoena.** This variety recently received from Bolivia bears lovely clear pink or orange pink blossoms. 3" - 4" specimens..... **\$2**
- Echinopsis oxygyna.** Pink flowers. **50c** and **35c**
- Echinopsis polyancistra.** Flattened, globular, dark green, thin spined with long-tubed, snow-white blossoms. 2" - 3"..... **50c**
- Echinopsis paraguayensis.** Pink. Nice..... **50c**
- Echinopsis paraguayensis brevispina.** 1" **35c**
- Echinopsis Ritteri.** Huge, snow-white blossoms to 8". 2" - 3"..... **75c**
- Echinopsis rhodotricha argentinensis.** Lilac Easter Lily. Blue-green, globular stems; pale lilac flowers. Red fruits. 3" - 4" **\$1**. 2" - 2½" **50c**. Smaller..... **25c**
- Echinopsis Smrziana.** A Bolivian species of caespitose habit. 5" **\$1.25**. Smaller..... **75c**
- Echinopsis Sylvestrii.** Very fine. Short, brown spines on narrow ribs. Flowers large white. 1" - 2" **50c** and..... **35c**
- Echinopsis turbinata.** A fine, vigorous species with very short spines and many white flowers. **50c** and..... **35c**



GOLDEN BALL

A lovely golden haired species, a great favorite always attracting attention. The soft, flexible, rich yellow spines are hair-like and thickly clothe the tall growing, cylindric plant. One of our choicest plants. *Notocactus Leninghausii* is very easy to grow. Rich porous loam, moderate waterings, sun or very light position. Handsome 10-15 years old specimens, 8 inch to 10 inch, **\$7.50**; 1½-inch to 2-inch, **50c** and **75c**. Smaller..... **35c**



SACRED MUSHROOM

A Living Rock from Mexico, smooth, bright, slate-blue and spineless. For centuries our Indians have used *Lophophora Williamsii* in religious rituals as a narcotic producing an illusion of colors. Pink blossoms. Likes sandy soil, moderate waterings. Mature imported plants, 1½ inches to 2½ inches, **50c** each.

Lophophora Ziegleri, each..... **\$1.00**

AT LEFT

DWARF CHIN CACTUS

An easily grown and easily flowered small cactus. *Gymnocalycium Quehlianum* grows 2 inches to 3 inches in diameter, the plant biscuit-shaped, black-green with low ribs and small blunt spines. Flowers large, white suffused with warm pink. Blossoms during spring and summer. Give it a sandy loam and during its growing time a little Cactus Food. Rest them well in winter. 1½ inch to 2-inch, **50c**. Smaller, each..... **35c**



NOTOCACTUS TABULARIS

Mature plants may reach 2" - 3" across, the low rounded ribs bearing only flexible, harmless spines. The bright lemon-yellow flowers are borne only at the top the buds densely covered with cocoa-brown wool. From Uruguay flowering in late spring. Fine 1½" flowering **50c**. Smaller each..... **35c**



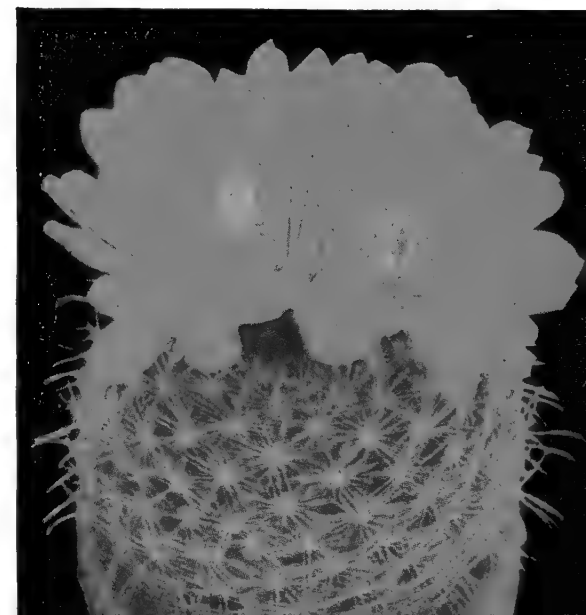
PINK CHIN CACTUS

Gymnocalycium Fleischerianum (3/5 natural size)
A very floriferous variety with charming flowers varying from white to pink. They come into bloom in April and flower till early fall. The plants begin to blossom when an inch in diameter and reach 3" across. Grows rapidly liking a rich loam soil. Semi-shade and plenty of water during summer. Fine 3 year old 2½" **75c**. Flowering 1½" - 2" **35c** and..... **50c**

PARODIA MUTABILIS

(Natural size)

The Parodias are small free flowering cacti from the high mountains of Argentina and Bolivia. This fine variety bears large, yellow to orange-yellow blossoms often stained at the base of the petals with red. Even small plants produce several blossoms in May and June. The plant is elegant with yellow to tawny-red spines and of the easiest culture. Loamy soil with moderate to generous waterings and sun or semi-shade. Large 6 year old flowering specimens **\$1** each. 2" — **50c**. Smaller 1" - 1½"..... **35c**





ROSE PLAID CACTUS

This is a very dainty small Chin Cactus quite brightly banded in copper green and cream. The blossoms are large in proportion to the plant and are very freely borne throughout late spring and summer up to quite cold weather. Even small plants carry flowers far larger than themselves. *Gymnocalycium Friederickii*'s blossoms are a lovely shade of pink. Though flowering size plants are easily grown it will always be scarce as small plants are very slow in growth. 4 year old plants 75c. Smaller 50c and.....

35c

Echinopsis Heavenly Twins. Pale pink twin flowers. 50c and.....

35c

Echinopsis Johnson's Hybrid. A lovely, frilled, dark pink flowers. Very free in bloom. Each 50c

Echinopsis Los Angeles. Large, handsome, frilled, pink blossoms. Plant large with very short spines. Each.....

50c

Echinopsis Makla. Pale pink hybrid.....

35c

ECHINOCACTUS

One of the oldest cactus genera. Described first in 1827, to which many plants now placed in other genera were originally assigned. As defined by Britton and Rose only those with pungent, persistent, scales on the flower tubes and with fruit densely covered with white wool, remain in the genus. Globular or cylindric plants with few to many ribs, top clothed with wool. Some grow to immense size, up to 3 meters high and must weigh many hundred pounds.

Echinocactus Grusonii. Golden Barrel. Page 14

Echinocactus horizontalonius. Page 14.

Echinocactus ingens. A large, globular species with many ribs which increase in number with age. When plants reach 3" in diameter they, like the following species, become beautifully banded with purple. 1"-1 1/2".....

35c

Echinocactus Palmeri. As a young plant similar to *E. ingens*. 1"-1 1/2".....

35c

AZTEKIUM

A monotypic genus from Mexico of very peculiar aspect. Plants 1 1/2" - 2" in diameter, globose-depressed with 9-11 low ribs, no spines and peculiarly furrowed horizontally. Flowers long-tubed, pink. Extremely slow in growth. Plant in sand with a little leaf-mold or in powdered slate and sand. Full sun.

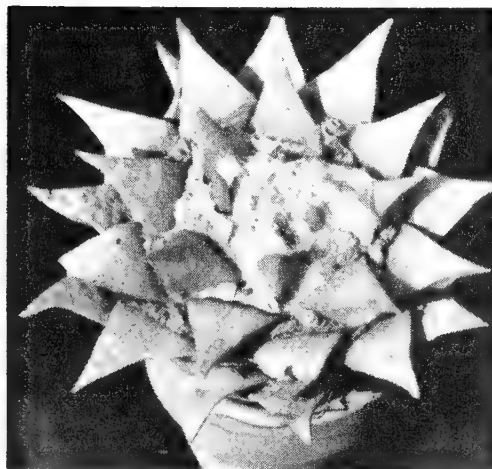
Aztekium Ritteri. Mature imports.....

\$2

ECHINOPSIS HAMATACANTHA

A charming small *Echinopsis* seldom exceeding 3" in diameter. Flowers when quite small. It grows at 8000' in the mountains of Argentina. Very easy to grow liking a rich, well drained soil and a light but not too sunny position. When growing enjoys plenty of water. 2" — 50c. Smaller.....

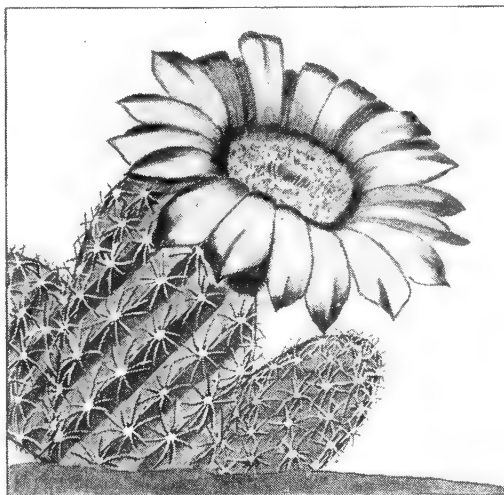
35c



ARIOCARPUS RETUSUS

These very slow growing plants make, due to their great interest and rarity, fine specimens. Our plants are all mature flowering plants averaging 2 1/2" - 3 1/2" in diameter. Each.....

\$2



LOBIVIA NEALEANA

Quite large bright red blossoms produced in early summer. A cluster forming species branching freely. Give it a rich, well drained soil and when growing plenty of water. Full sun or well lighted position. Nice flowering clusters.....

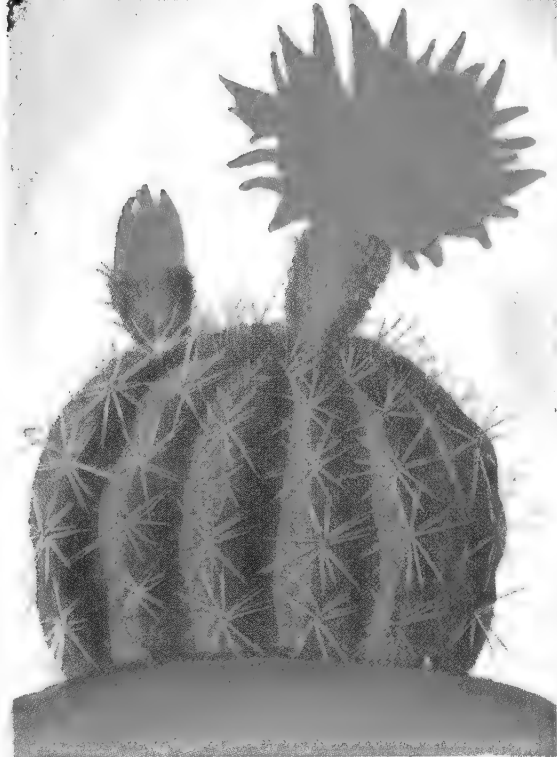
50c



WALLFLOWER CROWN

The *Rebutias* are very lovely small flowering plants. The blossoms come out from the base or older areoles and the plants flower over a very long period. *Rebutia Kupperiana* is very attractive particularly when the young spines are forming for they are half bright yellow, half-dark brown against the copper green of the plant body. They cluster freely but never become very large. Give them plenty of water and a sunny or light position. Each 50c and.....

35c



INDIAN HEAD

The flower buds appear as twists of cocoa brown fur which swell and burst some morning into widely expanded, glittering yellow blossoms, the red tipped stigma surrounded by minute stamens which roll down tightly when a bee lands in their midst. *Notocactus Ottonis* is remarkable in that it blooms from spring till fall. 2" \$1. 1 1/2" flowering plants 50c. Smaller.....

35c

FEROCACTUS

This fine genus, the true Barrel Cacti, was split off from *Echinocactus* by Britton and Rose because of the lack of felt in the crown and the naked scales of the tube and ovary. The plants when young are globular, later becoming tall-cylindric. Ribs numerous, acute; areoles felted with stout, straight or hooked spines often brightly colored. They need a light, sandy soil (heavy clay soils remain wet too long), moderate watering and a sunny position.

Ferocactus alamosanus. A fine species. 2" 60c. Smaller.....

35c

Ferocactus coloratus. A handsome Baja California species. 2".....

50c

Ferocactus Covillei. 2" 50c. 1".....

35c

Ferocactus glaucescens. Blue Barrel. Plant body becomes blue-white with light yellow, curved spines. 1 1/2" - 2" 50c. Smaller.....

35c

Ferocactus Herrerae. A giant up to 6' tall. Scarce. 1".....

40c

Ferocactus latispinus. (cornigerus). A fine easily grown plant.....

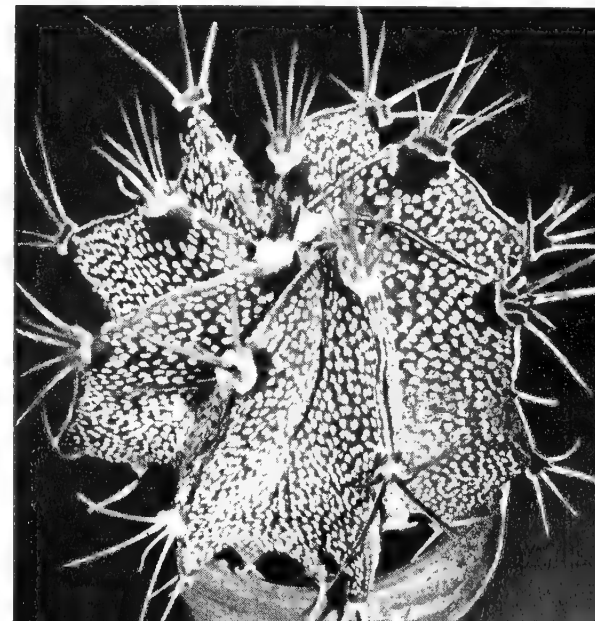
25c

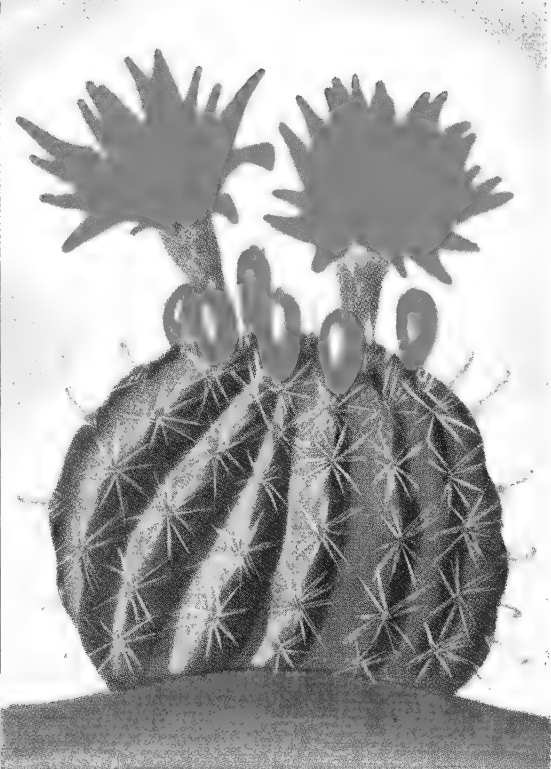
Ferocactus melocactiformis. (electracanthus). 35c

STAR CACTUS

Every collection should have the handsome and easily grown *Astrophytum ornatum*. It is beautifully flecked with a myriad of snowflakes which are really rayed scales. Large lemon-yellow blossoms throughout summer. Full sun or part shade. 2" — 50c. Smaller 1" - 1 1/2" each.....

35c





STRAWBERRY CACTUS

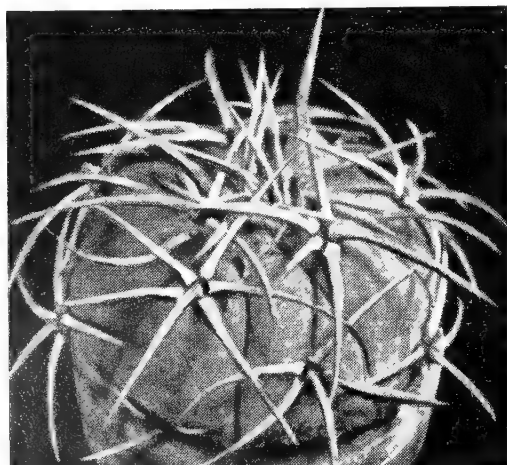
A patch of these is seldom without flowers in the summer. *Hamatocactus setispinus* grows so easily it is a great favorite with all. Sun or part shade and plenty of water in summer. Large 3" - 4" — 50c. Smaller..... 35c

- Ferocactus peninsulae.** Red Spines.....50c
- Ferocactus Pringlei.** Areoles with straw-colored long hair-like radials..... 35c
- Ferocactus rectispinus.** Giant Spined Barrel. In mature plants spines up to 10".....50c
- Ferocactus robustus.** Individual plants about 4" but form many-headed clusters. 3".....75c
- Ferocactus viridescens.** Small, flat-topped species 2" — 50c..... 35c
- Ferocactus viscaenensis.** Handsome bright red hooked centrals which become flat and wide with age 1 1/2" - 2" — 50c. Smaller..... 35c
- Ferocactus wislizeni.** Candy Barrel.....35c

GYMNOCALYCIUM

A very distinct group mostly from Argentina. Simple or cespitose, ribs divided into tubercles or "chins," flowers campanulate or short-funnelform, white, pink, red or yellow, flower tube with broad scales with naked axils. Fruit green or red. The generic name means "naked buds." Easily grown plants of great interest to the collector for their lovely, bright flowers. When growing they like plenty of water. Sunny or light position.

- Gymnocalycium Anisitsii.** A fine, white flowered species with dark body and whitish spines. Large 6 year old specimens 2" - 2 1/2".....\$1
- Gymnocalycium Andreae.** Yellow flowers 75c
- Gymnocalycium Bodenbenderianum.** Pale pink. Handsome. Large 6 year. \$1. Smaller.....35c
- Gymnocalycium Baldianum.** Pale pink. Large \$1. Smaller.....35c
- Gymnocalycium Bruchii.** (G. lafaldense). A dwarf species becoming cespitose and bearing many, handsome, pink blossoms. A very choice, pretty plant that should be very popular. Large \$1. Smaller.....50c

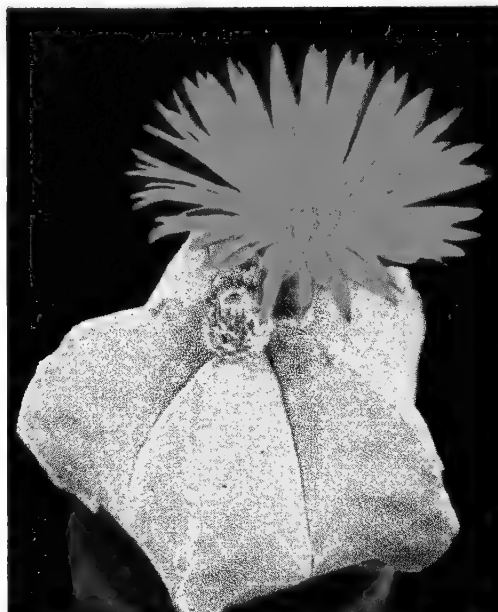


EAGLE CLAWS

An old favorite bearing handsome frilled, pink flowers in summer. *Echinocactus horizontalis* has a woolly crown, few rounded ribs and recurved, heavy, pink or red spines with pale silver-grey or blue body. Full sun, very sandy soil. Large 3 1/2" - 4 1/2" 75c. 2" - 2 1/2"..... 50c

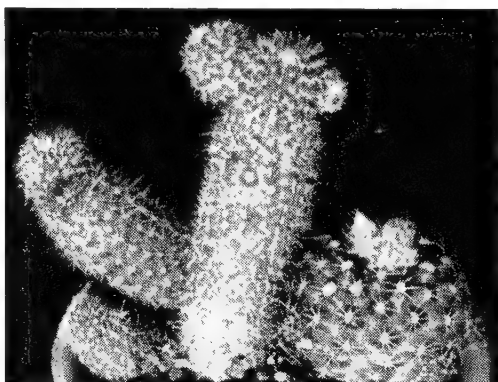
- Gymnocalycium Damsii.** Page 18
- Gymnocalycium denudatum.** Small.....\$1
- Gymnocalycium Delaetii.** (G. Schickendantzii).
- Gymnocalycium Friederickii.** Page 13.
- Gymnocalycium gibbosum.** A fine, heavily tubercled species with white to pink, large blossoms. 1 1/2" - 2" — 50c. Smaller..... 35c
- Gymnocalycium gibbosum Schlumbergeri.** A distinct variety with copper-green body. 2" — 75c. 2 1/2" - 3", 6 years old \$1. Smaller 1" - 1 1/2".....50c
- Gymnocalycium hyptiacanthum.** Ours probably a form of *Leeanum*.....50c
- Gymnocalycium Leeanum.** A small bright green species with low, rounded ribs and appressed spines and lemon yellow blossoms. Produces young plants by offsetting. 2" — 75c. Smaller..... 35c
- Gymnocalycium leptanthum.** Bears very large flowers warm pink in color. Plant 2" - 3", 6 years old. \$1. Smaller 50c and..... 35c
- Gymnocalycium loricatum.** Ready 1952.....50c
- Gymnocalycium Monvillei.** Stout, curved yellow spines. Flowers white. Large 6 years old flowering 2" - 2 1/2"..... 75c
- Gymnocalycium Mostii.** 1 1/2" - 2".....\$1
- Gymnocalycium multiflorum.** 3" — \$1. 1 1/2" — 50c. Smaller..... 35c
- Gymnocalycium multiflorum albispinosum.** 1 1/2" — 50c. Smaller..... 35c

Continued page 15



BISHOP'S CAP

A well known plant that should be in every collection. Very easy to grow. Flowers when small. *Astrophytum myrtilloides* has a long blooming period. Plant white, spineless. Light soil, moderate watering, light or sunny position. 1 1/2" - 2" — 50c. Nice plants..... 35c



FRAILEA

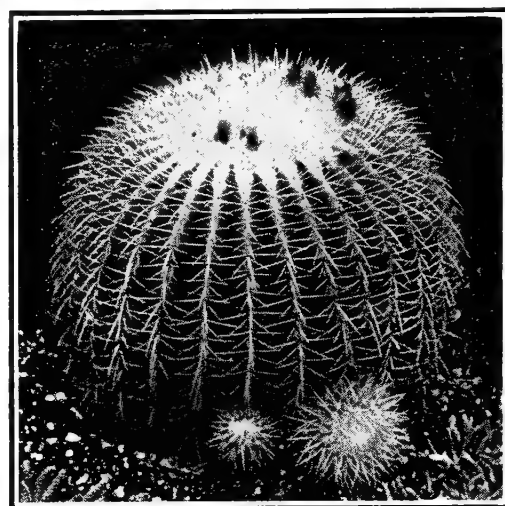
At the left is *Frailea gracillima* the only slender species which grows to finger size. At the right is *Frailea Grahiana* a globular form with nipples tipped with maroon. This little plant produces many youngsters which root to make a colony. Each..... 35c

- Frailea ancistrophora.** A very distinct species with hooked spines and very large yellow flowers. Not cleistogamous! Scarce.....\$1
- Frailea Dadakii.** Apparently solitary with close, recurved, short spines. Very slow grower. Flowering size.....50c
- Frailea psuedopulcherrima.** A very pretty species, bright green with russet spines. Pale yellow flowers. 4 years old flowering.....35c
- Frailea pumila.** Scarce. Each.....50c
- Frailea Schilinzkyana.** Clustered tiny plants. Flowering..... 35c



RAINBOW CACTUS

One of the handsomest dwarf blooming cacti. *Echinocereus melanocentrus* is sure to flower and has a long blooming period. Often flower when hardly an inch tall with blossoms larger than the plants! Likes a rich soil which should be sandy for good drainage. Moderate waterings, sun or partial shade. Flowering size 35c and..... 25c



GOLDEN BARREL

These form beautiful golden globes with age and are spectacularly beautiful specimens. *Echinocactus Grusonii* is a great favorite with collectors. The young plants bear nipples instead of ridges gradually assuming their mature character. Pretty at all stages with their bright, shining yellow spines. Likes a sandy soil, moderate waterings and a sunny or very light position. 2" - 2 1/2" each 50c. Small..... 35c

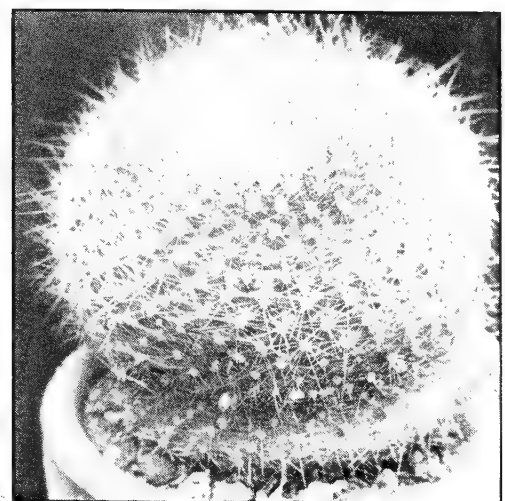
PORFIRIA

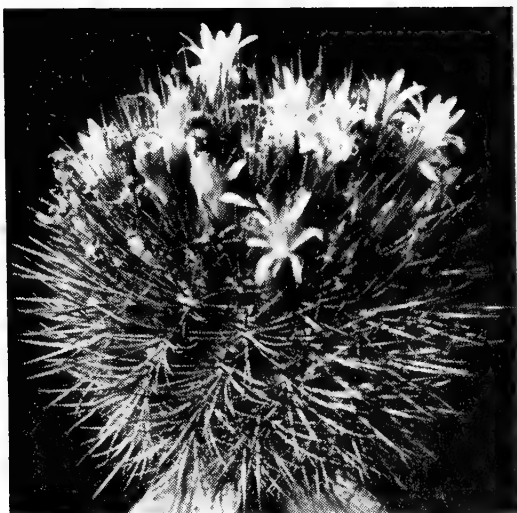
A small genus related to *Mamillaria* but is distinguished by a protruding ovary. Nipples small, tipped with tiny white radials. Plant flat-topped, small 1" - 1 1/2" generally solitary. Flowers pink; fruit clavate, bright red. Sandy soil, not too much water.

Porfiria Schwartzii. Mature plants.....75c

YELLOW BALL

A very choice, small plant with fine, yellow, setose spines and bearing small, yellow-green flowers. *Notocactus Graessneri* always grows faster on one side than the other giving the plant a pleasing, odd shape. 5 years old 2" — 75c. 1 1/2" — 50c. Smaller..... 35c





NEOPORTERIA NIGRIHORRIDA

A scarce and charming, very spiny cactus producing a myriad of bright pink blossoms in winter. Plant body often dark or almost black, spines silvery gray to black. A most attractive plant at all times. Give this Chilean plant a sandy soil, moderate waterings and a sunny or very light position. **35c**
Small.....

Gymnocalycium occultum. Similar to *G. Quehlianum*. 2" — **75c**. Smaller..... **35c**

Gymnocalycium Ourselianum. A distinct plant though the name attributed to Cels apparently was never published. Ribs few, spines stout, flowers lovely pink or white. Handsome. 2"-2½", 6 years old \$1. Smaller..... **35c**

Gymnocalycium Pflanzii. 1½" - 2", \$1 and **75c**

Gymnocalycium Quehlianum. Page 12.

Gymnocalycium sagliane. 2" — **75c**. Small 1952..... **35c**

Gymnocalycium Schickendantzii. White Chin. Page 17. A fine, strong growing species with dark coppery-green body, sharp ribs and heavy, curved spines. Free flowering the white blossoms often from lateral areoles. Reaches 3"-4" in diameter. 3" **75c**. 2" **50c**. Smaller..... **35c**

Gymnocalycium Venturianum. Flowers bright shades of red up to 1¾ inches across. A very lovely plant reaching 2" - 2½" in diameter, biscuit shaped with harmless spines. 2" — **75c**. Smaller **50c** and..... **35c**

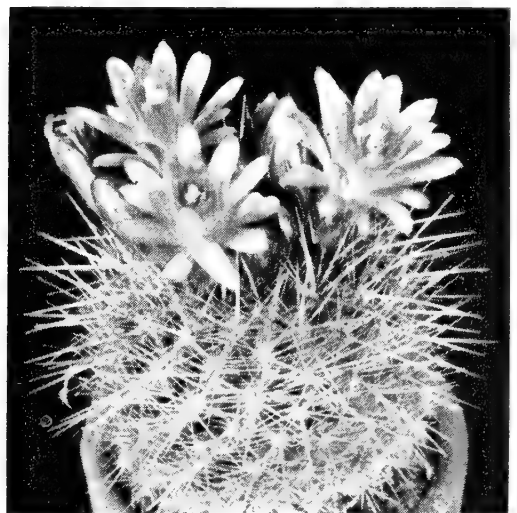
GYMNOCACTUS

A recent genus set up by C. Backeberg to accommodate some aberrant species of *Thelocactus* and *Neolloydia*.

Gymnocactus Giesdorfianus. A small, gray-blue plant with broad, angular tubercles and black tipped spines. Flowers white. Most interesting. Mature flowering..... **75c**

Gymnocactus Knuthianus. A little gem with straw-colored spines. Plants reach 2" - 3". Pretty, clear pink, freely borne flowers. Flowering small size..... **75c**

Gymnocactus subterraneus. A very tiny plant with a large tuberous root joined to the plant by a thin stem. Flowers white. Each..... **\$2**



NEOPORTERIA SUBCIBBOSA

Handsome flowered small Chilean plants with bright, clear pink blossoms which are borne from February till late May. The plants are globular to cylindric, strongly ribbed, the areoles with many short, stout spines. A free bloomer and very easy to grow. Has stood 20°. Our plants have been a lovely sight for months. 3"-4", 8 years old \$1.50. **50c**
Smaller \$1 and.....

HAMATOCACTUS

A small genus near *Ferocactus* with narrow tubed, funnelliform flowers with broad limb, scales on ovary few, fugacious, small, naked in axils. Fruit red or green, one species dehiscing by a basal pore the other fleshy. Plants strongly ribbed; one central spine hooked, often long, with many radials.

Hamatocactus hamatacanthus. A pretty flowered species up to 2' tall though generally much smaller. Flowers yellow. Fruit a brown-green berry. 2" — **50c**. Smaller..... **35c**

Hamatocactus setispinus. Page 14. Strawberry Cactus.

ISLAYA

A genus erected by C. Backeberg in 1934 for a small Southwest Peruvian plant related to *Mala-cocarpus*, none of which are found on the western side of the Andes. Plant globose-cylindric, ribs to 25, areoles felted, crown woolly, flowers short-funnelform, seed pods very distinct, pink, quickly exerted to 2½", inflated, with a few medium sized seeds. Easily grown but do not overwater.

Islaya bicolor. A new species found by John Akers. Plant coppery, flowers brown-yellow. Each small..... **\$3**

Islaya islayensis. Nice yellow flowers. Rare. **\$1**

Islaya minor. Charming. Scarce..... **75c**

ANCISTROCACTUS

A small genus placed in *Coryphanthaceae* principally because the flowers are borne in the axils and not at the spine areoles. Central spine hooked giving it the common name of Wait-a-Bit.

Ancistrocactus Scheerii. Large — **60c**. Smaller 2" **40c**



TOM THUMB

A very handsome small cactus from Argentina. *Parodia aureispina* has bright yellow spines, the central hooked, borne on small, tubercled ribs. They flower when small and are very lovely. The plants may reach 3" in diameter but blossom when only an inch. Grows very easily with ordinary care. Large 5 year old specimens \$1.50. Smaller — \$1. 2" — **50c**. **35c**
Small flowering.....

MATUCANA

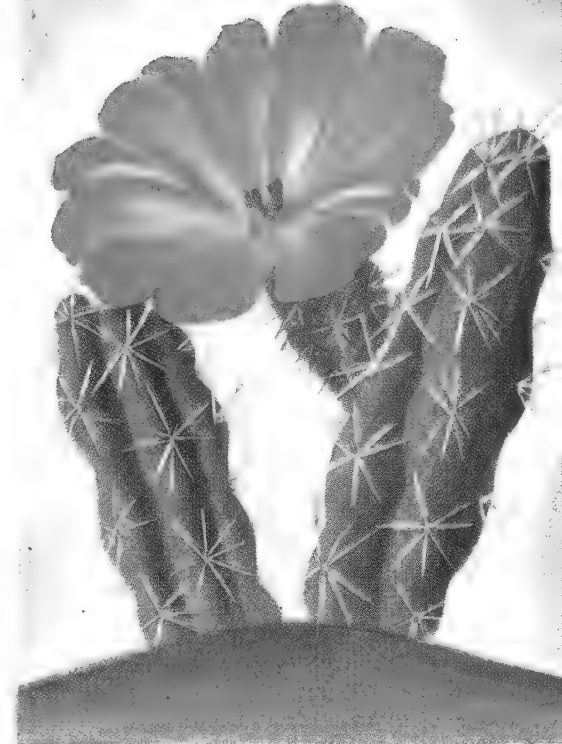
A most interesting genus from Peru named after the town where it was found. Plants simple, globose to cylindric; ribs numerous; areoles close, with many setose, white spines. Flowers tubular, zygomorphic, limb small. Scales on tube and ovary scattered, naked, small. Fruit dry, dehiscing by peculiar basal pores.

Matucana Haynei. Lovely white spined, red flowered, plant. Each..... **\$1**

MILA

A small genus of peculiar, dwarf cacti found near Lima, Peru of which the name is an anagram. Cespitose, cylindric small stems with low ribs, close woolly areoles and short to long bristly or hair-like spines. Flowers yellow, short-funnelform, with expanded limb. Scales of tube and ovary minute with few, long, white hairs in their axils. Fruit a small globular, green berry. The plants are numerous in a narrow band in the mountains near Lima about where the fog belt lies.

Mila caespitosa. Nice 3 years old plants. Keep on the dry side in winter..... **75c**



HEDGE HOG CEREUS

A particularly lovely flowered, small, clustered cactus. *Echinocactus pentelophus* bears 3" - 4" bright, violet-red blossoms on short, spiny, finger-like stems which branch freely from the base. The flowers are far larger and brighter than the illustration shows. **25c**
Clusters **50c** and **35c**. Smaller.....

ACANTHOCALYCIUM

A genus related to *Echinopsis* and *Lobivia*. The short-funnelform flowers however have scarious, rigid scales which bear woolly hairs in their axils. Within the tube is a woolly ring of short hairs just above the ovary. Plants globose to short-cylindric with ribs sometimes tubercled. Flowers pink, white, red or yellow. *Acanthocalycium violaceum*. Page 12.

MELOCACTUS Link & Otto

Cactus (L) Br. & R.

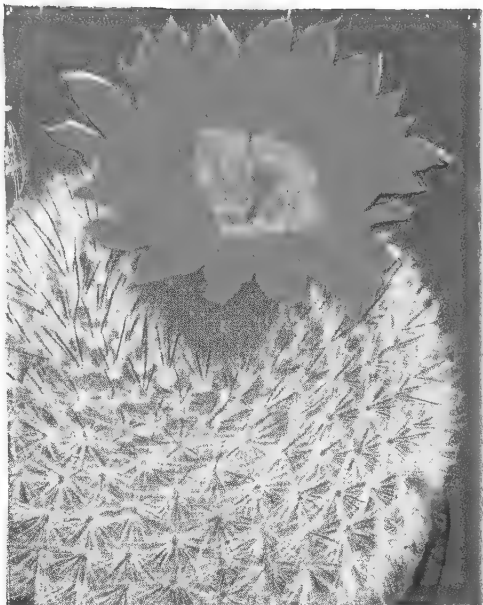
These strange plants were among the first cacti to be brought back to Europe from the Americas. They are found from Mexico to Honduras, the islands of the Caribbean and South America including the Guianas, Brazil, Colombia, Venezuela and Peru. They grow generally near sea level and are quite tender to frost. Plants are melon-shaped with from 9-20 ribs, sometimes tuberculate; areoles with stout, recurved spines; centrals one or wanting. After the plant has attained its full size it forms a terminal cephalium or inflorescence of bristles and hairs which thereafter grows in length producing small pink blossoms opening in late afternoon and white, red or pinkish, clavate berries. The cephalium is generally red or reddish from the red bristles and gives the plant the common name of Turks Cap which it closely resembles. A rich but porous soil very moderate waterings and a sunny location.

Melocactus Townsendianus. Small, without cephalium. **50c**

VIOLET EASTER LILY

All the Easter Lily Cacti are good window garden subjects and this is one of the best. The large blossoms are almost white tinged with violet. *Echinopsis leucantha* likes a rich well drained soil and moderate to generous waterings. Sun or semi-shade. 4 year old specimens **75c**. 2½" - 3" **50c**. **35c**
Smaller.....





SILVER BALL

An elegant, silvery spined, not common, cactus that always attracts admiring attention. *Notocactus scopa* grows well under a great variety of conditions. A native of Brazil. Flowers very freely in the spring, the buds woolly-brown opening into bright yellow blossoms which expand flat in the sunlight. Spines fine, bristly, silver-white, the centrals tipped red. 5 year old plants 2" — \$1. Smaller 50c and..... **35c**

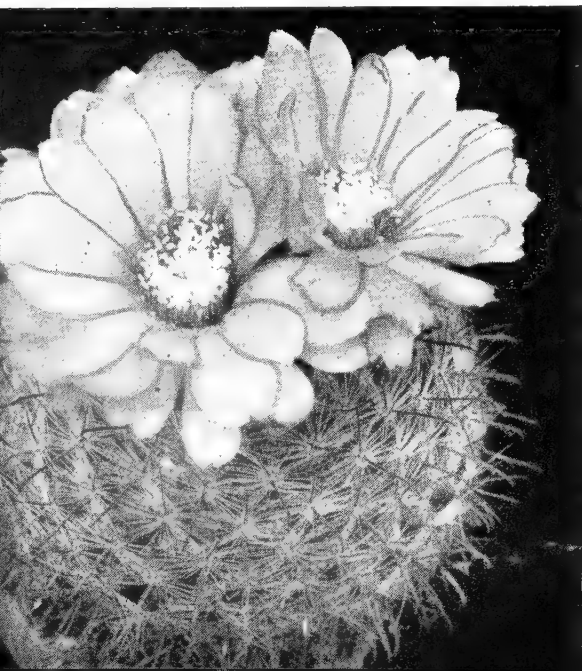
MALACOCARPUS

An old genus separated from *Echinocactus* in 1849. In 1922 Britton and Rose redefined the genus including the types of, or parts of, *Notocactus*, *Neoporteria*, *Islaya*, *Parodia*, *Pyrhocactus*, *Austrocactus*. Later workers have been inclined to accept a narrower interpretation of the genus centering around *M. corynodes* the type of the genus. As now interpreted the plants are very discoid with few but sharp ribs, in one species up to 20; strong, straight or curved spines and a felted or woolly apex. Flowers, bright yellow, short tubed with broadly expanded limb, tube scaly the axils with bristles as well as wool. Fruit soft, pink, barely emerging from the dense, woolly crown. They are easy to grow but are slow in growth reaching perhaps 4" - 5" in diameter, old plants caespitose.

- Malacocarpus corynodes.** 1½" - 2" **75c**...\$1
- Malacocarpus erinaceus.** Very pretty with bright blossoms. Like all the species it flowers over a long summer period. 1½" — **50c**. Nice 1" to 1¼"..... **35c**
- Malacocarpus Kovaricii.** Ready 1952..... **75c**
- Malacocarpus pauciareolatus.** 3". Each **\$1.50**
- Malacocarpus Sellowii.** 3". Each..... **\$1.50**
- Malacocarpus Vorwerckianus.** A smaller, more ribbed species. 1½"..... **\$1**
- Malacocarpus Vorwerckianus Hennissii.** 3". **\$1.50**

CRIMSON PARODIA

Brilliant ruby-red blossoms! *Parodia sanguiniflora* is one of the surest to flower and certainly one of the brightest and most cheerful little plants I know. Flowers borne in spring even on small plants. Easy to grow liking a rich well drained soil and a sunny or light position. 2½" - 3" — **\$2**. 1½" - 2" — **50c**. \$1. Small plants will be ready 1952.....



LOBIVIA

A large genus erected in 1922 by Britton and Rose to accommodate a group classed with the *Echinopsis*. The dividing line cannot be well defined for some intermediate species partake of both. The flowers have shorter tubes, are diurnal and are mostly red in color with some white, pink, yellow and orange flowered kinds. Plants globular to cylindric, simple or clustered, always ribbed, spiny, generally small in size. Fruit small, globular, the scales bearing hairs and in some recently discovered species, spines.

Culture. They like a reasonably rich, well drained soil and generally more water than many other cacti. They are native to high mountain regions where temperatures are seldom excessively high. Conversely they can stand considerable cold and in California seldom are injured. They like a light position and are particularly happy if they can be put outdoors during the summer.

Our collection contains a number of species we are not listing due to the confusion in nomenclature. Also many of which we have only a plant or so. Our European friends have been more than kind in supplying us with authentic material which in the future will provide check plants.

Lobivia aurea. Lovely yellow blossoms, some forms as large as an *Echinopsis*. One of the intermediate species near *Echinopsis*. See picture below.



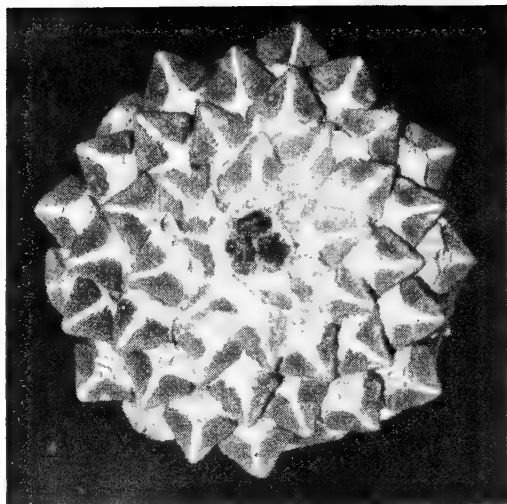
PINK EASTER LILY

A favorite for 100 years because of its ease of growth and splendid, large 6", fragrant, pink blossoms. No beginner should be without it. Give it generous treatment, a rich, porous soil and, while growing, plenty of water. To flower well it should have plenty of sunlight. Large 3 year old 3" **75c**. Smaller..... **35c**

- Lobivia Allegraiana.** Flowers red pink 2" clusters **50c**. Smaller..... **35c**
- Lobivia Backebergii.** Lovely. Nice **50c** to **\$1**
- Lobivia Binghamiana.** Flowers red. 2½". **75c**
- Lobivia boliviensis.** Flowers red. Plant caespitose..... **75c**
- Lobivia breviflora.** Page 11.
- Lobivia chrysacantha.** Scarce. 1"..... **50c**
- Lobivia chrysachaete.** Scarce. 2" - 2½". **75c**
- Lobivia churinensis.** A new and as yet undescribed species from Central Peru. The farthest north of known species. Flowers bright red 1½" - 2" **50c**. Smaller..... **35c**
- Lobivia cinnabarina.** 2½" - 3"..... **\$1.25**
- Lobivia corbula.** From Cuzco, Peru. A small caespitose species..... **75c**
- Lobivia densispina.** A pretty species both in plant and flower. Caespitose with setose spines and large yellow flowers. 3" - 4" **75c**. Smaller **50c**

Lobivia famatimensis. While this is certainly one of the very finest flowering *Lobivias* it is also extremely variable both in color of flower and size and appearance of plant. The flowers are usually orange yellow but there are red and pink forms also and short and long spined forms. See page 11.

- Lobivia famatimensis aurantiaca**..... **\$1**
- Lobivia famatimensis longispina.** Longer centrals. **50c**
- Lobivia famatimensis setosus** (*L. scoparius*) short, setose, whitish spines, flowers yellow. 3" **\$1**. Smaller..... **50c**



ARIOCARPUS KOTSCHOUBEYANUS

A remarkable Mexican plant with flat-topped green and leathery tubercles, grooved above, the groove with white wool. The flat, discoid plant is mostly beneath the ground only the top showing. The flowers are lovely violet-rose and appear near the center. It grows well in sand and leafmold with moderate waterings and a sunny location in the window. **\$1.25**
Mature 1½" - 2".....

Lobivia famatimensis nigricans. Handsome, body almost black, flowers dark red. 1½" - 2". **\$1**

Lobivia ferox. A long, stout spined species with the appearance of *Echinopsis*. Probably best classed with *Echinopsis* as flowers are white, nocturnal. Makes a handsome specimen. 2" - 3" each..... **75c**

Lobivia formosa. Large growing. 2" **50c**. Smaller..... **35c**

Lobivia formosa rubra. Red flowers. 2" **50c**. Smaller..... **35c**

Lobivia huasha. A glorious species with large golden yellow flowers and the habit of *Trichocereus*. Handsome. Large specimens 4" - 6" clustering **\$1.25**. Smaller..... **50c**

Lobivia huasha rubra. Lovely, rich red blossoms. Each **75c** and..... **50c**

Lobivia Hermanniana. Each..... **75c**

Lobivia Hertrichiana. Page 10.

Lobivia incaica. Each..... **75c**

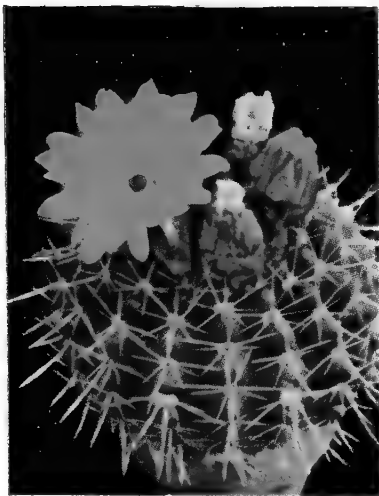
Lobivia Jajoiana. Tomato red flowers. 2" - 3" **\$1.25**. 1" - 1½"..... **50c**

Lobivia Jajoiana Fleishiana. **75c** and..... **50c**



GOLDEN EASTER LILY

Lobivia aurea bears handsome, bright, sparkling yellow blossoms. It flowers very freely over a long period. I consider *L. aurea* one of the choicest varieties and recommend it fully. Grows easily, liking a sunny position and plenty of water during the summer. I have some fine plants 2" - 2½" flowering **\$1.00**. Smaller 1½" **50c**. Small..... **35c**



NOTOCACTUS PAMPEANUS

A quite easily grown and flowered cactus seldom exceeding a small orange in size. It is found in South America. The bright blossoms appear in the spring after the winter rest. Thrives in a well lighted window liking a sandy loam. When growing will take more water. Very satisfactory plant. Large 2" 35c. 1 1/2" 50c. Smaller.....

Lobivia Johnsoniana. Grows to 3" or more with long, slender, light colored spines and bright pink flowers. Each.....50c

Lobivia longispina. A long spined, nocturnal, white flowered species probably more closely allied to Echinopsis. Nice plants 1 1/2" 50c

Lobivia lateritia. A red flowered Bolivian species. 3" clumps \$1.25. Nice 1" 35c

Lobivia mistiensis. Each.....\$1

Lobivia Nealeana. Page 13

Lobivia neo-Haageana. A dwarf species with large root. Flowers very pretty salmon color. Clusters.....50c

Lobivia ourensis. Very small plants but very cespitose. Plant dark green. Flowers red. Clumps 2" - 3" 75c

Lobivia psuedocachensis. A cespitose, dark green plant with carrot-like roots. Flowers dark red. Each.....50c

Lobivia Pentlandii. The oldest species (1844) and the type of the genus. A fine plant with red flowers. Nice 50c and.....35c

Lobivia raphidacantha. Very long, dark, reddish-brown spines. Cespitose. Flowers light red with bluish cast. 4" \$1. Smaller.....50c

Lobivia rubescens. A large growing, handsome flowering plant. Each.....\$2

Lobivia sanguiniflora. A fine, bright red flowered species, easily grown. Central spine often hooked. Cespitose. 3" — 75c. Smaller 50c and.....35c

Lobivia Walterspiellii. New species. Large, similar L. cinnabarina. Small 1" 1952.....75c

Lobivia Wegheiana. A beautiful, lilac-pink flowered species with long tap root. Plant simple to cespitose. 3" - 4" \$1. Smaller.....50c

NOTOCACTUS

This genus, first characterized in 1898 by Schumann, was included by Britton & Rose in Malacocarpus. It is distinguished now by its globular to elongated, dry fruits dehiscing by a basal pore, perhaps splitting in some species; ovary and tube with scales, their axils with bristles and wool. Plants globular to short cylindric simple or cespitose, the ribs often tubercled; areoles felted. Apex felted or naked. Flowers from top, short funnelform, yellow or pink.

CULTURE. Of all the genera of small, free flowering Cacti this is perhaps the favorite. It contains many of the brightest spined as well as bright flowered kinds. They are of the easiest culture for they are native to regions in Brazil, Uruguay, Paraguay and Argentina that are not too dry and desolate. The fibrous roots like good, well drained soil and the plants will take a reasonable amount of water in summer. They like a sunny or well lighted position. All will stand temperatures as low as 20° without injury.

Notocactus apricus. A pretty flowering small plant. See illustration on page 19.

Notocactus caespitosus. A beautiful small species with flexible, light colored spines on low ribs. Wool on the tube and buds light, flowers large, lemon yellow. Large 1 1/2" - 2" \$1. Small ready 1952.....35c

Notocactus concinnus. Ready in 1952.....35c

Notocactus Graessneri. A lovely plant. See page 14.



PLAID CACTUS

Gymnocalycium Mihanovichii

A brightly banded Chin Cactus with flowers varying from chartreuse to pale yellow or even chocolate. Extremely free flowering starting in spring and continuing until the cold weather of fall. The banding is pronounced and makes the small plant very attractive. Large flowering specimens 4 years old 2" - 2 1/2" each \$1. 1 1/2" - 2" 50c. Smaller.....35c

Notocactus Grossei. One of the largest growing of the genus. Plant globose although reported up to 5' high. Ribs about 16, spines few, yellow to brown or grey, apex felted; flowers pale yellow. Scarce. 1" - 2" 75c

Notocactus Hasselbergii. Spines glossy white. Flowers orange-red to crimson, small but freely produced. Very scarce. Each.....\$1.50

Notocactus Leninghausii. One of the choicest plants for specimens. The spines are slender, hair-like, flexible and golden yellow completely hiding the green plant below. Even the smallest plants are well clothed. At first simple it later is cespitose. Large 10 to 15 year old specimens 8" - 10" beginning to branch. \$5 to \$7.50. 1 1/2" - 2" 50c and 75c. Nice.....35c

Notocactus Linckii. Same habit as N. Ottonis but quite distinct. 1 1/2" - 2" 50c and 75c. Smaller.....35c

Notocactus mammulosus. 2" - 2 1/2" 75c. 1 1/2" 50c. Smaller.....35c

Notocactus muricatus. Rare species. 1" 50c

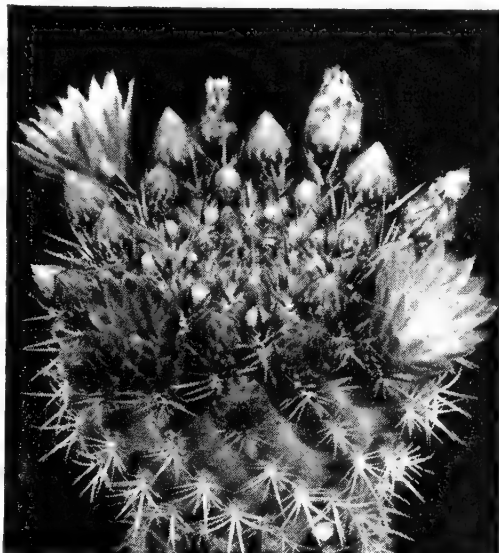
Notocactus Mueller-Melchersii. See N. rutilans the correct name for our plant.

Notocactus Ottonis. Indian Head. Page 13.

Notocactus Ottonis tenuispinus. Long flexible brown spines. Flower buds with whitish wool. Fine. 2" 75c. 1 1/2" 50c. Smaller.....35c

Notocactus Ottonis uruguayensis. 1 1/2" - 2" 50c and.....75c

Notocactus rutilans. sp. nov. With pink flowers. A lovely free flowering plant. Each 1" - 1 1/2" 75c



PYRRHOCACTUS

Pyrrhocactus tuberisulcatus commonly known as *P. horridus* is a very satisfactory plant with heavy, curved spines. It blossoms freely in late spring the flowers reddish yellow followed by red fruits which drop their seeds through the base when ripe. It makes an excellent plant to graft for then it grows rapidly and flowers quickly. It is a Chilean plant and like other plants from the coastal deserts of Chile is inclined to grow slowly. The deserts of Northern Chile are very dry due to the effects of the Humboldt Antarctic Current and plants are dependent on sporadic rains and the dense dripping fogs for moisture 2" — 75c.

Smaller.....50c



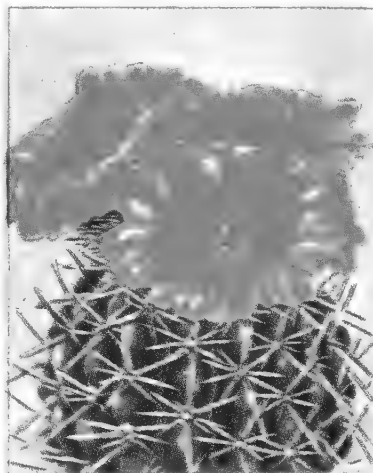
HARDY HEDGE CEREUS

These plants bear gaudy, bright rose-pink blossoms 2" to 2 1/2" across. They flower freely several times during the summer. Plants conical, 2 inches to 4 inches tall. Grow easily in sandy soil. Moderate water. Large flowering, each.....35c



WHITE CHIN CACTUS

A rare and fine plant, dark green in color and bearing heavy spines. Charming pink and white blossoms in early summer. *Gymnocalycium Schickendantzii* grows readily in sandy soil with moderate watering. Large 2 inch to 3 inch 75c to \$1. Smaller.....35c



LEMON BALL

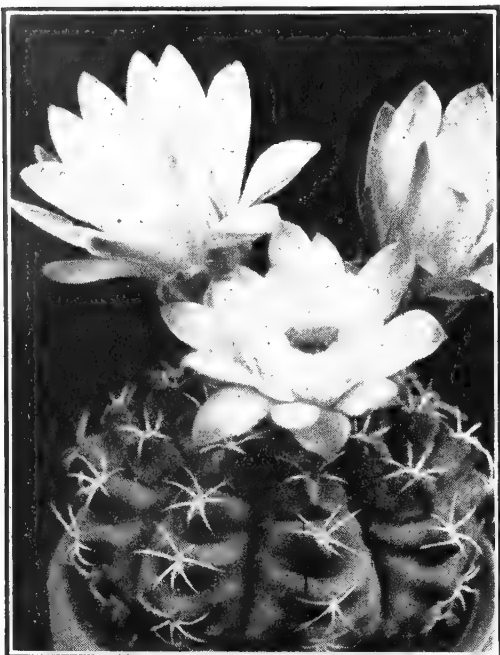
The very freest blooming and easiest to grow, *Notocactus submammulosus* should be in every collection. Light soil with moderate waterings increased when growing. Flowers for weeks. Mature 3 - 3 1/2" \$1.25. Smaller 50c and 75c. Small.....35c



GLORY OF TEXAS

Gorgeous crepe-like, brilliant pink blossoms over 2 1/2" across. Blooms from spring to fall. Flowers for everybody. Light soil with moderate watering. The cactus bicolor, flowering sizes 3" 50c. 2" to 2 1/2".....35c

SELECT COLLECTION. No. Z2. One each of Illustrated Cacti. Four Plants.....\$1.10



DAM'S CHIN

If you want lovely blossoms do not have this fine plant. *Gymnocalycium Damsii* is perhaps the easiest cactus to flower and grows well under a great variety of conditions. Will take considerable water in summer. Flowers white tinged pink. Large 4 years old, 2" - 2 1/2" — 50c. Smaller flowering **35c**

Notocactus Schumannianus. Giant Ball. A handsome species for specimens. Reported to 5' tall. Globular to cylindric with yellow spines. Flowers large, pale yellow. 3" - 3 1/2" — **\$1.25**. Smaller **75c** and..... **50c**.

Notocactus submammulosus. Similar to *N. mammulosus*. 3" - 3 1/2" Specimens — **\$1.25**. 2" — **75c**. 1 1/2" — **50c**. Smaller..... **35c**

Notocactus tabularis. Page 12.

OROYA

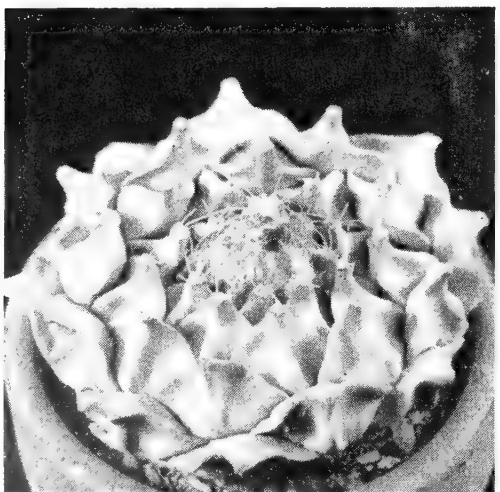
A monotypic genus from the high Andean region above Lima, Peru. Globular, solitary, ribbed plants with elongated areoles and very short-funneliform flowers. Near Matucana and Arequipa but flowering in the short tube. The plants at Oroya are very large up to 12" often cespitose through injury and are atypical. Typical plants are found in grass and rock on the surrounding slopes and passes at 13,500', 3"-5" in diameter with more pectinate spines.

Oroya peruviana. Small..... **\$1**

JOHNSON'S CACTUS FOOD

A well balanced food for Cacti and Succulents.

12 ounce bag..... **50c**
2 pound bag..... **\$1.00**



OBREGONIA DENEGRII

A monotypic genus of Mexican cacti close to *Ariocarpus*. It looks quite different but technically is hard to differentiate. The flowers are very pretty with their yellow stamens and white petals. The tubercles are triangular, hard, pale green and tipped with a few curling, flexible spines. Does well in sand and leafmold. Likes a sunny or well lighted position. **\$2.00**
Mature imports each.....

PYRRHOCACTUS

FLAME CACTI

A genus segregated by Berger in 1929 from Britton & Rose's *Malacocarpus*. It is very close to *Neoporteria* but plants are generally more heavily spined and flowers short-funneliform. In *P. Straussianus* the tube is gibbous. In *Neoporteria nigricans* the flowers are like *Pyrrhocactus* and so are the spines. A distinct dividing line is difficult to draw. They are easily grown plants of very slow growth liking a light or sunny position and well drained soil. Stand temperatures to 20° without injury when dormant.

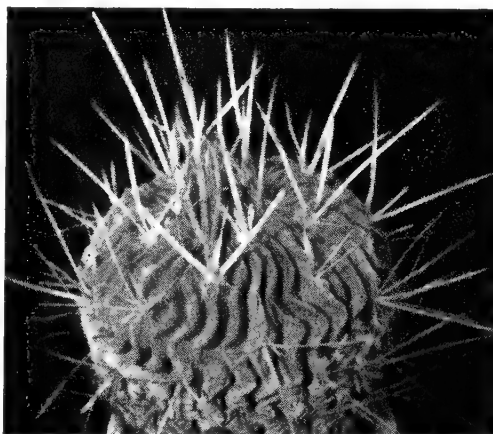
Pyrrhocactus tuberisulcatus (*P. horridus*, *P. Soehrensii*) A splendid species very strongly spined, with reddish-yellow flowers borne in a ring about the top. 2" — **75c**. Smaller..... **50c**

Pyrrhocactus curvispinus. Flowers pale reddish yellow, spines slender tipped with black. Plant inclined to be very cespitose. Each..... **\$1**

STENOCACTUS

Echinofossulocactus B. & R.

A distinct and beautiful genus with no very close relatives. The plants are globular, solitary, well spined and with up to 100 thin, often wavy ribs. The only exception is the type, *S. coptonogonus*, with about 10 ribs. The pretty, pink, purple or white, blossoms are generally striped, campanulate, the tube and ovary with scarious, naked in the axils. Fruit small, globular, dehiscing by splitting the seeds oozing out, stuck together with mucilage which the dew and rain dissolves allowing the seeds to fall. Give them the same treatment as *Mamillaria* which they roughly resemble. Splendid plants of easy culture and very attractive. There are a great many kinds and the nomenclature is very mixed up as the plants are variable. Many "species" are perhaps but geographical variations though just as interesting as any.



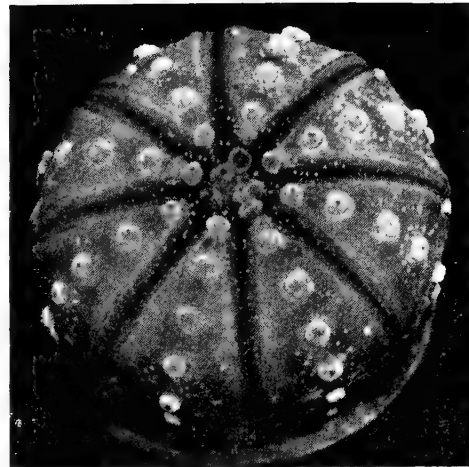
STENOCACTUS

The plants offered are 3-4 years old and many flowered in 1951.

Stenocactus albus. 1".....	40c
Stenocactus anfractuusus. 1 1/2" - 2".....	75c 50c
Stenocactus arrigens. 1" - 1 1/2".....	50c
Stenocactus carneus. 1" - 1 1/2".....	50c
Stenocactus coptonogonus. 2" — 75c . 1".....	40c
Stenocactus debilispinus. 1".....	50c
Stenocactus densispinus. 1" - 1 1/2".....	50c
Stenocactus flexispinus. 1".....	50c
Stenocactus hastatus. 1".....	40c
Stenocactus Lloydii. 1".....	35c
Stenocactus multicostatus. Large flowering.....	\$1.50
Stenocactus Melmsianus. 1" - 1 1/2".....	50c
Stenocactus obvallatus. 1" - 1 1/2".....	50c
Stenocactus Ochoterenaus. Large flowering.....	\$1.50
Stenocactus pentacanthus. 1 1/2".....	50c
Stenocactus phyllacanthus. 2" 75c . 1 1/2".....	50c
Stenocactus robustus. 1 1/2" 50c . Smaller 1".....	35c
Stenocactus sphacelatus. 1" - 1 1/2".....	50c
Stenocactus undogonus. 1" - 1 1/2".....	50c
Stenocactus unolatus. 1" - 1 1/2".....	50c
Stenocactus. Nice plants my choice, named.....	40c

DENMOZA

A peculiar Chilean genus with long, S-shaped, tubular, closed, red flowers, the tube closed with white wool, stamens and stigma exerted; throat, short tube and ovary covered with imbricated, lanceolate scales in the axils of which



SAND DOLLAR

One of the dodecacti, entirely spineless and freely bearing large yellow blossoms with a red throat. Very scarce even in the wilds where it grows scattered thinly on the desert mesas. Best potted in a very porous soil or in sand and leafmold, watering lightly when dry. Give it a very light position with some sun. It flowers from May to October. Large specimens **65c**
90c. Smaller 2" - 2 1/2" each.....

are silky hairs. Fruit globular, dry, splitting when ripe. Plant globular, with a splitting to 4'; areoles felted; spines on young plants stout, curved. Likes a rich, porous soil, moderate waterings and a sunny location.

Denmoza rhodacantha. 4" - 6" each..... **\$4**

PARODIA

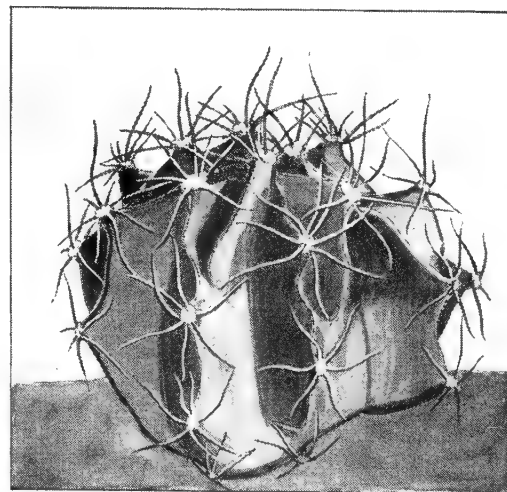
A lovely genus first described by Britton & Rose under *Hickenia*. A distinct group apparently not intergrading with the related genera, *Frailia*, *Notocactus* and *Malacocarpus*. Plants solitary, globose to cylindric, umbiliculate with spiralled ribs which are tuberculate, sometimes with nipples as distinct as *Mamillaria*. Areoles woolly when young, proximate, spines straight or more often with one hooked central. Flowers at apex, campanulate with very short tube, limb broad, the petals in various shades of yellow and red. Scales on ovary and tube small, axils with wool and bristles. Fruit small, thin walled, splitting above the base to free the small seeds with their white, corky hilum. A very satisfactory group for the collector as the plants are easily grown, small, elegant in appearance and often bright spined. Many of them are very free in flower. Same treatment as for *Mamillarias*. All the species I know stand temperatures to 20°

Parodia aureispina. This charming species is pictured in color on page 15.

Parodia chrysacanthion. A handsome bright yellow-spined species. Spines straight, acicular. Of slow growth. Flowers pale yellow. Plants 1" - 1 1/2" **50c** and..... **35c**

Parodia mutabilis. Handsome with reddish, hooked central. Flowers brilliant orange yellow often with red throat. Page 12.

Parodia sanguiflora. Page 16.



MELON CACTUS

A fine Barrel Cactus with yellow and red, strongly curved spines. Easily grown and one of the most popular of this fine group. *Ferocactus melocactiformis* has yellow flowers and pale, bluish-green body contrasting well with the colored spines. Grows quickly in sandy soil in a sunny or well lighted position. Each..... **25c**



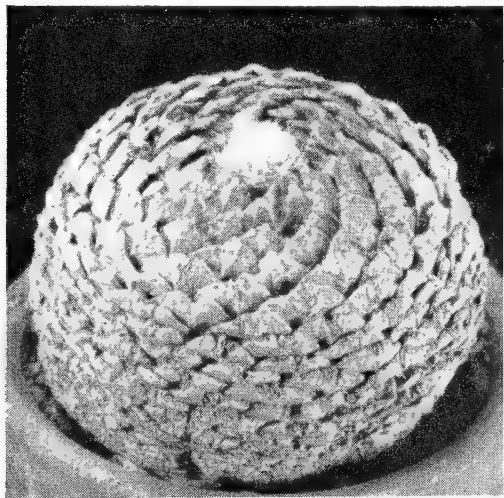
THELOCACTUS NIDULANS

A curious, heavily spined cactus from Mexico. While the spines are stiff they are not wicked and peculiarly, they shed with age. The ribs are heavily tubercled the plant body blue-gray. Flowers large and white. Mature imports..... \$2

REBUTIA

A genus of small plants closely allied to Lobivia with which they differ in being tubercled rather than ribbed and in the small globular fruits being thin walled, red or yellow instead of green. There are many intermediate forms which have been assigned to Aylosteria and Mediobivia. These groupings help to bring out relationships to the student but botanically are hard to justify. Plants very easy to grow, very floriferous and generally small. Use good, rich, well drained soil rather more water than most cacti and a light, not too hot or sunny location.

- Rebutia aureiflora** (Mediobivia) Orange yellow..... 75c
- Rebutia Fiebrigii**. Scarlet flowers..... 50c
- Rebutia Krainziana**. A distinct species with elliptic, white, spineless areoles and dark red flowers. Very nice. 1952..... 75c
- Rebutia Kupperiana**. See page 13.
- Rebutia minuscula**. One of the loveliest of small flowering cacti. Scarlet blossoms. Beautiful. 50c and..... 35c
- Rebutia pseudodeminuta**..... 35c
- Rebutia senilis**..... 35c
- Rebutia Spegazziniana** (Aylosteria)..... 50c
- Rebutia Steinmannii** (Lobivia)..... 50c
- Rebutia violaciflora**. Brilliant rosy - violet flowers very freely borne over a long period from January on. Large plants 75c. Smaller 50c and 35c



PINE CONE CACTUS

Encephalocarpus strobiliformis is closely related to Ariocarpus differing in the numerous, scale-like, dorsally keeled, incurved, closely imbricated tubercles, on the ventral side a tiny areole and few spines. The flower is a lively violet-pink in color borne in late spring. The plants never seem to attain more than inch and a half or so in diameter and grow very slowly. They grow very well in coarse sand with some leafmold if placed in a sunny, warm position. Water moderately. Will stand temperatures as low as 20°. Mature flowering specimens. Imports..... \$2

STROMBOCACTUS

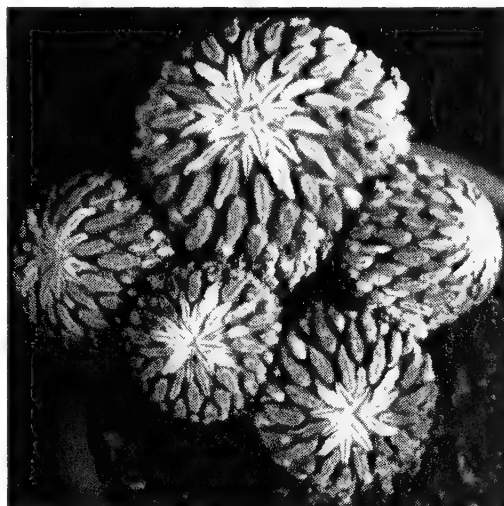
A small genus of flattened globular plants with flattened tubercles arranged in spirals with or without spines. Flowers campanulate, white or pink with scales on the tube and upper part of ovary. Related to Ariocarpus though not too closely. These Mexican plants are found in very dry regions. They grow very slowly and prefer a very porous soil or sand and leafmold. Do not overwater. They flower regularly in summer.

- Strombocactus disciformis**. Mature..... \$1.50
- Strombocactus psuedomacrothele** (Turbino-carpus) \$1.00
- Strombocactus Klinkerianus**. Mature..... \$2.00

WEINGARTIA

A genus (originally Spegazzinia) of globose to cylindric plants with fibrous or thickened roots, low tubercles in spirals. Flowers from near apex, short-funnelform, rich orange yellow. Tube and ovary with scales, axils naked. Bolivian and Argentine plants.

- Weingartia Cumingii**. 1"..... 50c
- Weingartia Fidaiana**. Ready 1952..... \$1.00
- Weingartia Neumanniana**. Ready 1952. \$1.00



PELECYPHORA ASELLIFORMIS

Extremely rare in cultivation. The plants are related to Mamillaria. They are 1" - 1½" in diameter bearing apical, large, bright purple-pink blossoms. These Mexican plants are real oddities. It likes a sunny place in the window and very sandy soil or sand and leafmold with moderate waterings when dry. Mature flowering imports each..... \$1.25

Pelecyphora Valdeziana. A rare new species, white spined and smaller than the above. Mature flowering. \$1.50

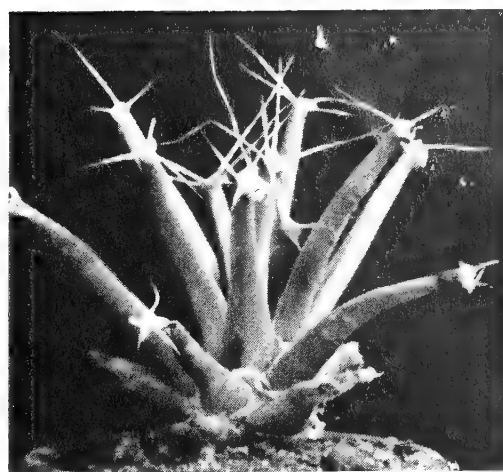
SOLISIA

Solisia pectinata is a curious, small, white-spined plant with yellow flowers related to Mamillaria. Mature specimens..... \$1.50

THELOCACTUS

An anomalous genus, principally Mexican and Texan, that needs a great deal more study for the plants generally placed in it are probably not too closely related. The plants are ribbed or tubercled, often spiraled. Flowering tubercles more or less grooved above and flowers not borne at spine areoles. Plants globose-depressed or cylindric; flowers at apex on nascent tubercles, diurnal campanulate; scales on ovary few, axils naked; fruit dehiscent by a basal pore. Belongs in Coryphanthanae and is related to Ancistrocactus, Neolloydia etc. Culture as for Echinocactus. A very light soil, sunlight and moderate waterings. The flowers are generally very lovely in pink, yellow, white or garnet.

- Thelocactus bicolor**. Page 17.
- Thelocactus bicolor** var. **tricolor**..... \$1.50
- Thelocactus bolansis**..... 50c
- Thelocactus Bueckii**. Mature..... \$1.25
- Thelocactus Ehrenbergii**..... 75c
- Thelocactus hastifer**. In 1952..... \$1.50
- Thelocactus heterochromus**..... \$1.50
- Thelocactus hexaedrophorus**..... \$1.50



AGAVE CACTUS

Leuchtenbergia principis

One of the oddities of the cactus family and without any close relatives. Instead of ribs it bears long, angled tubercles which gives it more the appearance of an Agave than a cactus. It is a member of the Echinocactanae as it bears its flowers near the tips of the nascent areoles and has a dry, scaly fruit dehiscent by a basal pore. Flowers are large, straw-yellow and quite fragrant. The tubercles are blue-green the tips bearing an areole with papery, yellow, curling ribands. Monotypic, give it a porous but rich soil and plenty of sun. Easy to grow. Nice 50c and..... 35c

- Thelocactus longispinus**. 1952..... 75c
- Thelocactus leucanthus**..... 75c
- Thelocactus nidulans**..... \$2.00
- Thelocactus phymatothele**..... \$1.00
- Thelocactus porrectus**. 1½"..... 50c
- Thelocactus Pottsii**..... \$1.50
- Thelocactus rectispinus**..... \$1.50
- Thelocactus subporrectus**..... 75c
- Thelocactus Saussieri**. Small..... 40c
- Thelocactus tulensis**..... \$1.00
- Thelocactus uncinatus**. Large 50c. 3"..... 35c

Most of these offered are mature imported specimens.

ECHINOMASTUS

This small genus rightfully belongs in Coryphanthanae as Marshall has correctly stated though all other authors have placed it with Echinocactanae. It bears its flowers at the base of the tubercles and not at the spine bearing areoles. Not very easy to grow as they come from very dry regions. Grow well in sand and leafmold with moderate water supply in summer. A well lighted, airy position.

- Echinomastus durangensis**. Large..... \$1.25
- Echinomastus intertextus**. Large..... \$1.50
- Echinomastus Macdowellii**. Large..... \$1.00



SUN CUPS

Notocactus aprieus

A charming spring blooming cactus that bears blossoms often larger than itself. One of my favorites growing so easily, flowering so freely. The buds are covered with chestnut wool. Blossoms bright yellow 1" - 1½"..... 35c

CEREUS

TO this large group belong most of the tree-like Cacti except the Opuntias. Most of them are native to the warmer regions, the tropics and subtropics, from our extreme southern states through Mexico and Central America and the adjacent islands south to Argentina and Chile. They are found from the salty ocean beaches to high in the Andean ranges to perhaps 12,000 or more feet. They vary in size from an inch or so to recorded heights of 64' some having a great candelabrum-like head of many branches. Some of the largest are in Baja California and Arizona though Argentina and Mexico have their quotas. Many bear large blossoms of yellow, red or white and a more inspiring sight can hardly be imagined than the tall, fluted columns studded with their snowy chalice sparkling in the early morning sunlight.

The plants present a great diversity in form and in habit. All have ribbed stems, sometimes partially tuberculate. Though they are described as several to many jointed yet many are single jointed. They are cylindric to columnar, some branching only at the base others branch above, some repeatedly so to form the candelabrum-like heads. Those that branch at the base seldom attain great height perhaps 15'-20' but those that have a single trunk may become very woody and attain enormous size. The flowers are borne at the older, usually lateral areoles. In Neoraimondia the same areoles bloom yearly and attain 3" in length. The flowers are very variable some tubular, funnelform or salverform and followed by fleshy fruits, some of large size (I have weighed them to 11 ounces) and often very pleasing to eat.

Many are climbing and some epiphytic and these have the largest blossoms, up to a foot or more, and are generally nocturnal. They climb by aerial roots which are produced on the side touching the support. A few have hooked, tuberculate ribs which hold the plant in place as it thrusts up through the brush or branches.

BERGEROCACTUS

Native to Southern and Baja California and adjacent islands. It is confined to the hills near the sea. One of the most colorful of Cerei with long golden spines. It grows in clusters the old stems dying away as new ones advance. Flowers small, campanulate, yellow with spiny ovary. *Bergerocactus Emoryi*.....50c

CLEISTOCACTUS

Of recent years a great many new species of this fine genus have been discovered and described. The original species as defined by Britton and Rose were only three, confined to Paraguay and Argentina. We now know that northern Argentina, Bolivia and Peru have many kinds with probably more to be found. They are slender plants, branching from above or below of distinctive appearance. Flowers long, tubular without expanded limb, generally red or whitish with scales on ovary and tube, the axils with hair or wool. Fruit small, globular, red or yellowish. While the plants are easily identifiable as *Cleistocactus* there is considerable diversity. Some bear lovely red blossoms very freely, others have white or red tinged spines and others make fine branched specimens. They are of the easiest culture liking a rich, porous soil and during summer a reasonable amount of water. The white spined species like less water. Most of them have survived temperatures as low as 20°

Cleistocactus apurimacensis. A newly discovered, as yet undescribed species. From the valley of the Apurimac near Cuzco, Peru. 4" - 6" each.....50c

Cleistocactus Baumannii. A slender species to 3' tall with many branches from the base. Extremely free in flower. Blossoms vivid scarlet. Splendid. 10" - 12" 75c. Smaller.....35c

Cleistocactus Herzogianus. To 6', much branched. Flowers dark red. 5" - 10" 35c and.....50c

Cleistocactus Morawetzianus. From seed collected in the type locality. A large plant to 8' or more branched from above. Makes a stately specimen. Grows in company of *Morawetzia*. Flowers whitish 50c and.....75c

Cleistocactus Roetzlii. A Bolivian species, much branched. 5" - 10" 50c and.....75c

Cleistocactus smaragdiflorus. Brown spined species to 3'. Flowers red tipped with green. Each.....50c

Cleistocactus Straussii jujuyensis. With brown spines.....50c

Cleistocactus tominensis. A very large, stout species. Cuttings 6" \$1. Seedlings 6" - 8".....50c

Cleistocactus tupizensis. A short, stout species with many long, red-tinted spines. Very attractive. 10" - 12" — \$1. 3" - 6".....50c

BLUE MYRTLE CACTUS

Myrtillocactus geometrizans is a very interesting plant with widely branched head. Both small seedlings and large plants are covered with a bright, blue-white bloom. In winter they turn smoky violet. A fine window plant easily grown.....35c

PEANUT CACTUS

Chamaecereus Sylvestrii

One of the most popular varieties of cacti and easiest to grow. This Argentine plant will often produce 15-20 branches in a single season. Should be in every collection. Flowers in late spring. Likes moisture. Sun or shade. Nice plants beginning to branch — 35c. Single.....25c

QUEEN OF THE NIGHT

An old favorite with huge 12-inch blossoms. *Selenicereus Macdonaldiae* is free blooming growing quickly and easily, liking partial shade, a rich but porous soil and generous waterings during the summer. The flowers are truly magnificent the outer petals golden yellow the inner ones snowy white. They bloom on last years stems, not on the new growth, and are more sure to blossom if put outdoors during the summer so the growth will be vigorous and matured. Each.....35c

CLEISTOCACTUS HYALACANTHUS

This is the so called "white *Straussii*" though it actually is a quite distinct plant with very different flowers. The stems are stouter and the spines hyaloid. A beautiful specimen, when well grown reaching 3' though handsome at all times. Plants 75c and.....50c

ONE OF OUR CACTUS HOUSES

A section of one of our cactus greenhouses showing how young plants are grown. This house contains larger seedlings before they are put out doors in glass covered frames where they develop their bright colors and strong root system. The plants, you will observe, are grown in community "flats" i.e., shallow boxes.

AND IT'S ALLIES

CULTURE. Most of this group do very well under almost all average conditions. Their root systems are vigorous and if the plants are not too persistently overwatered they give a good account of themselves. More loam may be used in the soil mixtures for the stronger growing genera such as *Lemaireocereus*, *Acanthocereus*, *Eriocereus*, *Gymnanthocereus*, *Monvillia*, *Nyctocereus*, *Rathbunia*, *Trichocereus*, etc. Where heavier soil is used less water is required and one should see that the soil does not become water-logged or sour. Those plants from very dry regions are best given the lighter or more sandy mixtures. A general rule of thumb is that cacti with a very heavy spine armament or those with bright colored spines or white hair or a hard leathery epidermis even thought spineless, are from quite dry regions. There are so many apparent exceptions to rules that one hesitates to give the advice that every experienced grower uses every day. However a little experience will show that the above information is useful whenever in doubt. Plants from very dry regions like an airfilled soil and the simplest way to achieve that is by the liberal use of sand and charcoal. Often in the wilds, plants may grow in heavy soils but nevertheless in cultivation will thrive in the light mixtures.

In window gardens one must use windows that are available but, if choice may be made, those facing south are given first choice. East windows or west windows are almost equally useful and very good results may be obtained. North windows may be used but since no direct sunlight enters more care must be taken in watering. After the first season north exposures produce few flowers. Many plant enthusiasts are building small greenhouses either attached to the house and heated from the house plant or separate. Lord & Burnham Co., of Des Plaines, Ill., have a full line of such greenhouses which may be purchased knocked down and easily re-erected.

ARTHROCEREUS

A rare and odd genus of small cerei from Brazil and Argentina. The type species has very short joints from which the genus received its name which means "jointed Cereus." The later additions are not nearly so multi-jointed. In fact if *Spegazzini's Echinopsis mirabilis* is placed here it is definitely single jointed. Flowers nocturnal, white with very long slender tube, the stigma never exerted, stamens in a ring at the throat mouth, adnate to the tube.

Arthrocereus microsphaericus. Scarce.....\$1

AZUREOCEREUS

A new genus recently described by Akers & Johnson. The type species was found in the valley of the Montaro River, Central Peru. A tall tree-like plant with few, strict branches and bright blue epidermis. Many rounded, low ribs; areoles large, felted; radial spines straight, centrals bent-deflexed, long. Flowers nocturnal, white with large, imbricated, lacinate scales on tube and ovary. Recently a second species has been sent me from southern Peru.

Azureocereus nobilis. 5" - 6" \$2. 4".....\$1.50

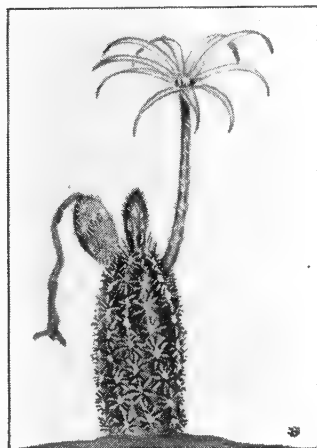
ACANTHOCEREUS

A widely distributed genus found from Florida and Texas to Brazil and Colombia. The plants are clambering or weakly upright, 3-4 ribbed, often heavily spined. Flowers nocturnal, salverform, white or greenish-white, large. Fruit red with red flesh. The plants are often very vigorous. I have found them in Colombia, Panama, Guatemala and Mexico. In Colombia I collected plants on both sides of the Magdalena River which now appear to be distinct species.

Acanthocereus colombianus. 5" - 8".....50c
Acanthocereus guatemalensis.....\$1.00
Acanthocereus sp. Colombia.....50c

SETIECHINOPSIS

A monotype set up for *Echinopsis mirabilis* which differs from *Echinopsis* in its dry fruit, short stamens arranged in a single series and tube scales long, bristle-like.



Setiechinopsis Mirabilis

A very interesting tiny plant 2" - 3" tall with an almost black stem. Every plant will flower! Easy to grow. Flowering specimens..... 35c



GIANT MEXICAN CEREUS

Pachycereus Pringlei as it grows in Baja California. Since they grow slowly they are fine window garden plants. Each..... 25c



DEVIL'S FINGER

Echinocereus Berlandieri. (Two-thirds natural size)

You will treasure this fine flowering, dwarf, plant which flowers in April. Lovely 3" flowers with lustrous petals enclosing yellow stamens and emerald green stigma. Short, finger-like stems. Soon form nice specimen clusters. Very easy to grow. Rich porous soil and moderate waterings. Stands temperatures to 15° when dormant. Clusters 50c. Smaller..... 35c

Echinocereus papillosus. Handsome Texas species with short, finger like growths and fine 3" yellow flowers with red throat. Very fine species easily grown and flowered. Plants caespitose free flowering. Each..... 40c



WOOLLY TORCH

A handsome Old Man that at flowering time produces masses of long silky white hair. The plant body of *Cephalocereus Palmeri* becomes a beautifully powdered blue. A Mexican species generally branching from the base. Flowers pink. Easy to grow. Plants 50c and..... 35c



OLD MAN CACTUS

Cephalocereus senilis

The long, snowy-white hair of this venerable cactus makes it one of the most sought after. No collection should be without it. In Mexico it is becoming more and more scarce as the small plants have been ruthlessly dug up and the old plants chopped down to get the seeds. The Mexican government has recently passed laws to regulate this. Likes a sandy, well drained soil and a light or sunny position, very moderate watering. 3" - 75c. 2" - 2 1/2" - 50c. Smaller..... 35c

CEPHALOCEREUS

A large genus redefined by Britton & Rose to include *Pilocereus*. There are good grounds for making a separation as the plants are quite diverse, particularly in the way the flowers and fruits appear on the plants. In *C. senilis* there is a definite pseudoccephalum near the top furnished with bristles and dense, tawny wool in which the flowers are more or less hidden. Some species produce a mass of silky-white wool but with visible fruits and others with less hair down to none at all. Several new genera have been proposed. The plants vary greatly in appearance some being very white haired, others have blue stems, others have little or no hair. Many are tree-like some to 30', others are much smaller to 3' or 4', one is procumbent. While our collection has over 35 species only a few can be offered.

Cephalocereus alensis. Yellow spined. 6" - 8" 50c. Smaller..... 35c

Cephalocereus catingicola. Small..... 40c

Cephalocereus Collinsii. A very pretty yellow spined species..... 35c

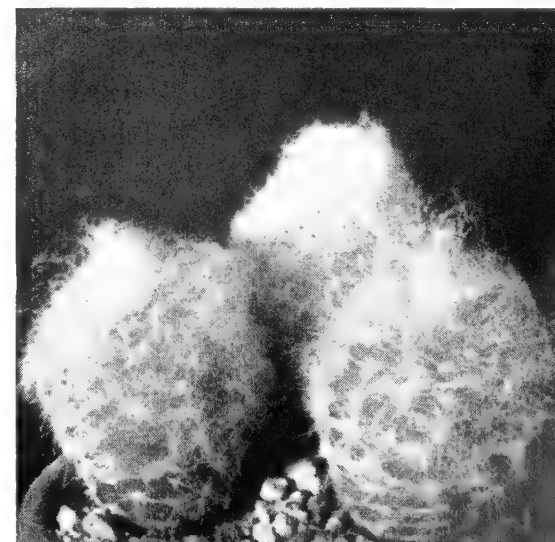
Cephalocereus chrysacanthus. A beautiful golden spined species, turn to page 23.

Cephalocereus glaucochrous. Lovely, dwarf. Bright blue stems..... 35c

Cephalocereus Hoppenstedtii. Scarce. 4" - 6" \$1.25

SNOWBALL CACTUS

One of the scarcest and choicest of the Old Man Cacti. The fine, silky-white hair entirely clothes the young plants so that they appear as tufts of white cotton. *Pseudoespostoa melanostele* grows near Lima, Peru. Grows easily liking a quite sandy soil, very moderate waterings and a light or sunny position. Some varieties have long yellow spines. Show specimens 2" - 2 1/2" each \$1. Smaller 50c and..... 35c





WHITE TORCH CACTUS

Popular, beautiful and exceedingly easy to grow. *Trichocereus Spachianus* is a fine plant for the window garden. The large, snow-white blossoms are borne near the tops of the stems. Plants branch freely from the base forming nice colonies. Will stand 10° above zero when dormant. Nice 6" - 8" — 50c. Smaller..... 25c

Cephalocereus leucocephalus. Masses of white wool at flowering time. Pretty — 50c and..... 35c
Cephalocereus macrocephalus. Imports..... \$2
Cephalocereus nobilis. A small branched species..... 50c

Cephalocereus Palmeri. Page 21
Cephalocereus polylophus. Page 28.
Cephalocereus Purpusii. Slender stemmed to 10'. Spines yellow. Named after Dr. Purpus a botanical collector in Central Mexico who supplied many cacti. We received some of our first plants from him in 1910. 6" - 8" — 50c. Smaller..... 35c
Cephalocereus Royenii...... 75c

CORRYOCACTUS

The known species are Peruvian with perhaps some in Bolivia. The genus is not well understood and it is hard technically to separate from *Erdisia* though visually they are easily identifiable. They extend north from Arequipa and Mollendo, where the described plants are found, at least to Chala and I saw them as high as 12,000'. Plants columnar to 6', stiff, erect, strongly ribbed, spiny. Flowers diurnal with very short tube and broad, open throat, perianth yellow or orange; filaments stiff, much shorter than petals, numerous; style short with numerous stigma lobes; scales on tube small, subtending large areoles conspicuous with brown or black wool. Fruit globular, juicy, much spined.

Corryocactus brevistylus. Small..... \$1.50
Corryocactus melanotrichus...... 75c
Corryocactus sp. Chala...... \$3.00

DAYAM'S TREE CACTUS

One of the best flowering and fruiting kinds. *Cereus Dayamii* (the plants in cultivation are probably hybrids) is a stout, thick stemmed species bearing long-tubed flowers with reddish outer perianth segments white within. Large tomato-colored, edible fruits. Plants 7" - 8" — 50c. Smaller..... 35c

CEREUS

A large genus mostly found in South America though some extend to the islands of the Caribbean. The plants are usually tree-like and branched though some are low or prostrate. The tree-like forms have a stout trunk. Humboldt in his *Travels* speaks of a cylindric cactus (probably *Cereus*) near Maniquarez (Venezuela) with a trunk 4' 9" in circumference and plants 30' - 40' tall. The flowers are very distinct, long-funnelform, white or pink nocturnal, with almost naked tube, the perianth falling away from the ovary as the petals wilt leaving only the long style attached to the fruit. Fruit large, fleshy, smooth and spineless, red or yellow with white, crystalline, sweet pulp. The flowers of *C. Huntingtonianus* are pink, the fruit with red pulp inclined to be dry. The species are all desirable and in subtropical and tropical regions have been widely planted for their ornamental effect and their fruit. They like a rich, porous soil and a sunny position. In winter they may be stored in a light, frost-free basement or attic. They stand considerable cold and most will survive 20° when dormant.

Cereus aethiops. Stems bluish to purplish, rather slender, ribs low..... 50c
Cereus alacriportanus. Tree-like. 50c and 35c
Cereus azureus. Bluish..... 50c
Cereus caysium. Tree-like. 50c and..... 35c
Cereus Dayamii. See below.
Cereus hexagonus. A tree-like species..... 35c
Cereus Hildmannianus. Tree-like 50c and 35c
Cereus horridus. Tree. 50c and..... 35c
Cereus Knuthianus. Tree-like. 50c and..... 35c
Cereus lepidotus. Tree-like. 50c and..... 35c
Cereus Llanosii. Small tree. 50c and..... 35c
Cereus milessimus. Spiny. 50c and..... 35c
Cereus obtusus. Low growing..... 75c
Cereus pernambucensis. A prostrate species. 50c

Cereus peruvianus. A much branched plant to 8'..... 35c
Cereus peruvianus reclinatus...... 35c
Cereus peruvianus monstrosus. Curiosity plant. A very monstrous variety that always retains its habit. Page 26.

Cereus trigonodendron. Schumann. Engler 40: 413 1908. This curious species was recently sent me from southern Peru. A tree-like, branched plant with 3 to 9 thin, undulate ribs, perianth reddish on outside white within, fruit oblong yellow (?). Young growth with much white wool at areoles. Seedlings thin-ribbed but without wool. 8" - 10" \$1. 4" - 6"..... 50c

Cereus variabilis. An interesting, low growing Brazilian species with very woolly areoles on the young growth. Each..... 50c

CHAMAECCEREUS

A small Argentine genus placed near *Rebutia* and *Lobivia* differing from *Rebutia* by bearing the areoles on ridges and from both in its creeping, prostrate habit. While it hybridizes freely with *Lobivia* it is not too close. The small, much branched plants of the common species are found in almost all collections. They grow under almost any conditions. To flower well they like a long winter rest. When dormant they will stand temperatures below 20° without damage.

Chamaecereus giganteus. Fric. This distinct plant is 1 1/2" in diameter branching from the base. Scarce. Each..... \$1.00

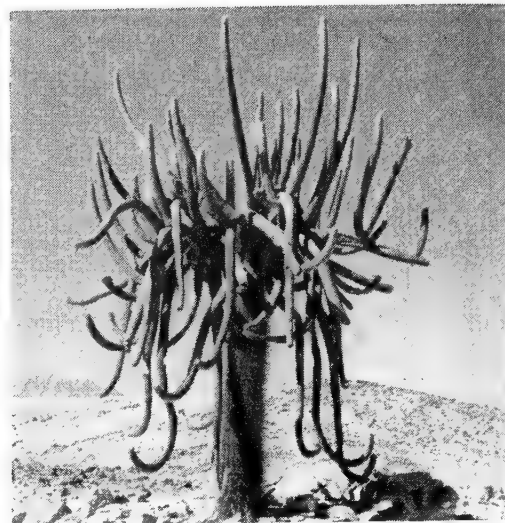
Chamaecereus Sylvestrii. Peanut Cactus 35c

Chamaecereus Sylvestrii crassicaulis. A monstrose form each branch cresting. Not always available. Each..... 75c

Chamaecereus Sylvestrii x Lobivia aurea. Nice orange-red flowers..... 50c

ERDISIA

An interesting genus from Peru and Chile and probably also Bolivia. Those from the Atlantic drainage of the Andes are quite different in aspect from those of the western slopes. *Erdisia Meyenii* from Arequipa is a short, fat stemmed plant forming colonies connected below the ground. The eastern species are slender stemmed either upright or creeping, sometimes with quite large rootstalks. The photograph in Britton & Rose is probably not that of *E. squarrosa* nor is it sure the plants around Cuzco are *E. squarrosa*. I did not see plants from the type locality Tarma but collected plants at Ollantaytambo, another species at Limitambo at a lower elevation, another species at Huanuco with very fine spines and one other at Huancayo which somewhat resembled the one



BROWNINGIA CANDELARIS

One of the strangest appearing plants in nature. It grows on the very arid, barren deserts about Arequipa, Peru at 7,000' - 9,000'. In the background may be seen the snow-capped cone of El Misti volcano. The cactus has a columnar, very heavily armed trunk which branches into a head of slim, almost spineless branches which in age become lax and contorted. Growing as isolated specimens in company with *Arequipa*, *Trichocereus*, *Binghamia*, *Corryocactus*, *Erdisia*, *Tephrocactus* and *Opuntia*. No plants available. Photo by John Akers.

at Cuzco and Backeberg's *E. maxima*. The genus is close to *Corryocactus* and needs more critical study. Flowers red or orange red.

Erdisia Meyenii...... 75c
Erdisia squarrosa. Cuzco..... \$1.00
Erdisia from Ollantaytambo...... 50c
Erdisia from Limitambo...... \$1
Erdisia maxima. Ready 1952..... 75c
Erdisia Ruthae. Not published. Ready 1952. \$1

ERIOCEREUS

Britton & Rose treated *Eriocereus* as a sub-genus of *Harrisia* but there appears good grounds for separating them. They are night flowering the blossoms large, white or pink the fruits red. They are scandent or climbing or procumbent often with almost tuberous main roots. They are strong growers and like a good sized pot and rich porous soil. Plenty of water during the growing season. They will stand temperatures of at least 20°.

Eriocereus Bonplandii. A handsome, vigorous species with very large white flowers. Blooms from late spring until late fall. One of the best blooming *Cereus* I know. 50c and..... 35c

Eriocereus Martinii. Page 29

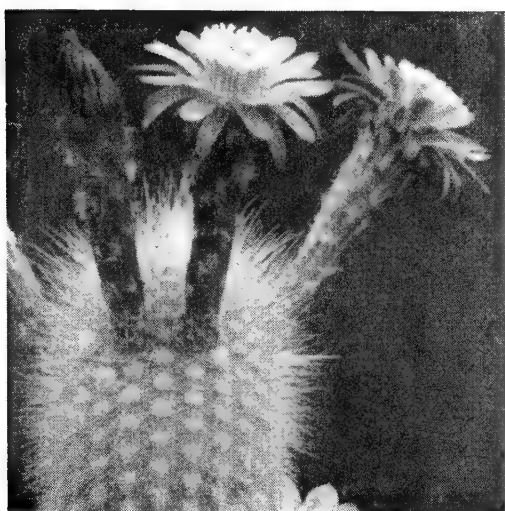
Eriocereus Regellii. Pink Moon Cactus. Lovely, pale pink blossoms. A very fine plant..... 35c

Eriocereus tortuosus. A very spiny round stemmed species. Large white flowers. Each 35c



WHITE CUP CACTUS

Trichocereus Schaeferi bears enormous, snow-white blossoms the outer segments tinged pink. The fat, green stems are gemmed with fine brown spines. It branches freely from the base and makes a very handsome cluster. Flowers in early summer. Very easily grown. Each \$1.50, 75c and..... 50c



PERUVOCEREUS RUBRISPINUS

Lovely, bright reddish-yellow spined, Peruvian cacti. They reach an occasional height of 5' - 6' but are generally not more than 3' - 4'. They branch at the base to form a specimen with 3-6 erect stems. The white or red flowers are very pretty opening at dusk. The Peruvocereus make handsome pot plants. Each.....

50c

EULYCHNIA

A small north Chilean genus of stout, erect or procumbent, branched, spiny cacti. They bear pink or white, diurnal flowers which are very short with broad open throat. Scales on flower tube and ovary numerous their axils with hair or bristles; filaments very short covering the face of the throat; style short and thick. Fruit globular, juicy, sweet scented, apparently without spines, naked or with wool.

Eulychnia castanea. Very rare. Each.....

50c

ESCONTRIA

A monotypic Mexican genus. The plants are very large branching vase-shaped from a single short trunk. Spines arranged in pectinate clusters, on the few sharp ribs. Flowers very small for such a plant, yellow, diurnal the ovary covered with chartaceous, imbricated scales which are translucent and persistent. Fruit globular, scaly, purple and is sold fresh or dried in the markets.

Escontria chiotilla. 6" - 8".....

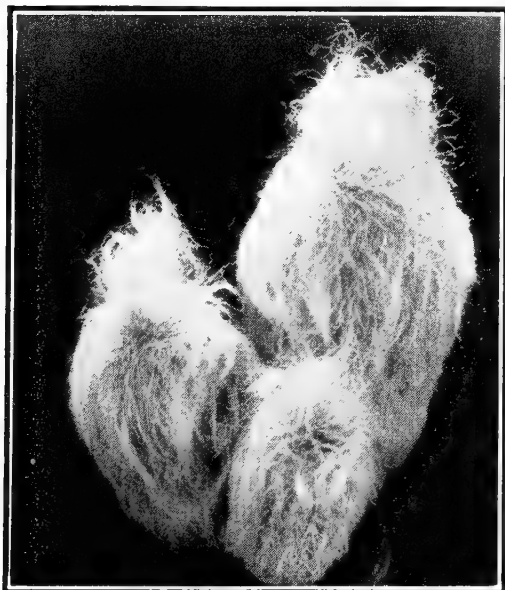
\$1.25

GYMNANTHOCEREUS

A genus of branched cerei of central and northern Peru. The plants as I saw them were perhaps 10' tall with stiff ascending branches, ribs rounded, low; flowering areoles with bristles; spines short. Flowers small, white nocturnal; fruit with few scales, axils without hairs. A distinct genus.

Gymnanthocereus chlorocarpus. 10" - 12" \$1.25. 6" - 8".....

50c



PERUVIAN OLD MAN

Eupostoa lanata

A handsome plant covered with white, cottony hairs. Very easily grown and a great favorite. Native to northern Peru. No collection should be without this unique species. Sandy loam soil and moderate waterings. A sunny or very light position suits it. Nice plants 50c and.....

35c

ESPOSTOA

This beautiful genus was founded by Britton & Rose in 1920 on *Cactus lanatus* of Humboldt, Bonpland and Kunth who described their collections in 1823. Columnar plants with numerous low ribs; plants upright, branching; areoles with strong spines and bearing long white hair. Flowers small, nocturnal, white with outer segments pinkish, short campanulate, nearly hidden in the dense psuedocephalum developed on flowering stems. Tube short, stamens and style included. Scales on ovary and tube small, acute the axils with long, silky, caducous hairs. Fruit subglobose to broadly obovoid, smooth, red or white, with white flesh, sometimes fragrant, very juicy, acid, edible. Seeds small black, dull.

This genus has been much mixed up due to lack of information. Dr. Rose included the distinct species from above Lima, Peru with the plants from northern Peru (the true *E. lanatus*). His photographs and figures 88, 89, 90 and 91, Vol. 2 are Backeberg's *Psuedoespostoa* which was separated because of its glossy seeds and basal branching. The flowers are nocturnal not diurnal as stated by Mr. Backeberg. This *Psuedoespostoa* is found also north of Lima where the spines are more prominent and shine with a purplish glint in the sun. Mr. Akers and I found four other distinct species of *Eupostoa* between Lima and Chiclayo and at Huanuco on the Atlantic drainage. The plants are of easy culture enjoying a light, porous soil and a sunny or light position. Keep dry in winter. They are liable to be injured below 27°.

Eupostoa sp. Canyon del Pato. With the whitest, softest silky hairs of all. The plants are more slender than any others. 3" - 4" \$2.50

Eupostoa huanucoensis. A lovely species (not *C. Dautwitzii*) with long white hair. The whole plant has a soft yellow color. The seedlings are stout. The plant when mature is 6' - 8' tall, divaricately branched—I counted as many as 50 branches—some rising from near the base and producing secondary branches. Flowers as in the type. Fruit white, fragrant rather tasteless. Lovely plants—\$1 and.....

75c

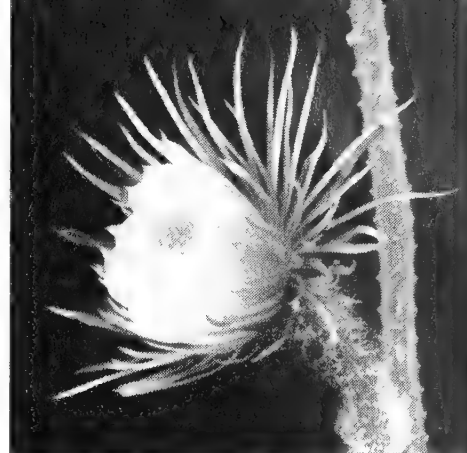
Eupostoa lanata. See photo below.

Eupostoa mocupensis. This is a very tall plant, to 15' with a few ascending branches. Ribs low about 20, straight; areoles proximate, rather large, felted with many wispy white hairs; radial spines about 40 about 1/4" long the lateral ones about 25, straw yellow, the central more erect ones shorter and red brown. Central spines often wanting, porrect, grey to reddish 1/2" - 3/4" long. Flowers nocturnal, white tinged pink, lost in the not too luxuriant psuedocephalum. Fruit bright red, odorless, an inch in diameter. A very beautiful species. Each 3" — \$1. Smaller.....

75c

ARMATOCEREUS

A genus erected to include the South American *Lemaireocereus*. The plants appear very much like *Lemaireocereus* but are generally far more wickedly spined and some that I have observed bear two types of branches. The normal branches have a woody axis while often on the tips of these branches are borne much



PRINCESS OF THE NIGHT

A glorious blossom and one of the largest in the cactus family. *Selenicereus pteranthus* is the most satisfactory and freest in bloom of this group. Grows rapidly and without special care, flowering during the summer. Even small plants will bloom on matured stems. A rich, porous soil, moderate to generous waterings during the summer growing season with protection from the midday sun in summer. Each 75c and.....

40c

smaller, easily detached branchlets, sometimes 2 - 3 end to end and pendent. These branchlets are different with shorter spines and since they are easily detached probably aid in the distribution of the species. Technically they are hard to differentiate from *Lemaireocereus*. I found three distinct new species in one Andean valley and Mr. Akers found another one near Lima.

Armatocereus armatus. A new species from near Lima, bluish with few strict branches to 15' very spiny. It is also found a hundred miles north of Lima. Each.....

50c

Armatocereus matucanensis. A stout, much branched species found at Matucana above Lima.

75c

Armatocereus mocupensis. A tall species to 35' with strict branches. Trunk heavily armed with acicular spines to 5". See page 25.....

75c

BORZICACTUS

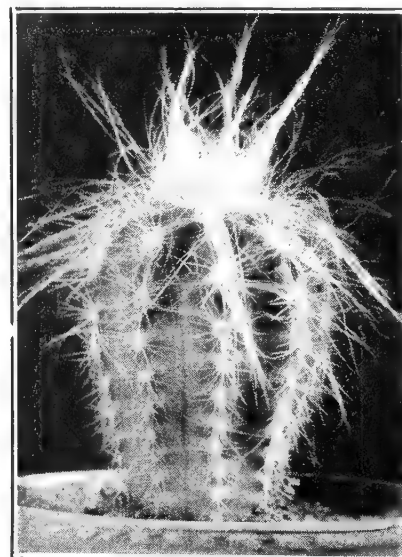
A small genus found from north central Peru to Ecuador. Britton & Rose placed within it plants since removed to other genera. Since the type species has a ring of hair in the tube and the others from the same geographical area and obviously closely related also have this ring it is proposed to include in the genus only those having this ring. Many plants have been named and figured from Ambato to northern Ecuador. So far as my observations go these cannot be substantiated for such variations can be found in every colony I visited in this great area.

Long spines, short spines, slender and stout, included and exserted stamens are all intermixed. In north central Peru Mr. Akers found a new species and also B. Fieldianus. Two other new plants have heavily tubercled ribs, tubular flowers with expanded limb and lack the hair ring.

Borzicactus sp. Ambato. 2" - 4".....

50c

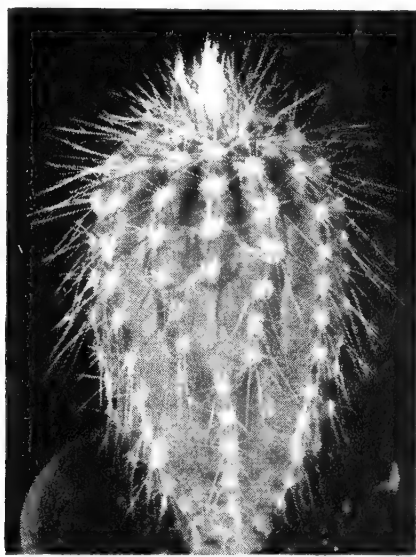
Borzicactus sp. Road to Otavalo. 3" - 4" 35c



OLD MAN OF THE ANDES

The *Oreocereus* are among our very choice plants and now are very scarce. They bear long, wispy white hairs and stout, brown spines. *Oreocereus celsianus* grows high in the Andes on barren slopes and may reach 3' - 4' in height. Each small.....

75c



GOLDEN OLD MAN

A pretty, bright yellow spined plant the young plants bearing some wool at the areoles. The mature plants are lovely blue the ribs gemmed with yellow spines. *Cephalocereus chrysacanthus* at flowering produces masses of white wool. 4" - 6" — 50c. Small.....

35c



PERUVIAN APPLE

The small plants of these tree Cerei, *Cereus hybridus*, are very popular. They grow rather more quickly than most cacti and under almost all conditions; they like a rather rich soil and a generous water supply during summer. The fruits vary from red to yellow, are crisp and sweet, the pulp of crystalline whiteness weighing up to 11 ounces and are smooth and spineless. 5" - 8" — 50c. Smaller..... **25c**

Borzicactus sp. Chota. 3" - 4"..... **50c**

Borzicactus subulatus X *Loxanthocereus*. 2" - 3". *Borzicactus subulatus* is a very distinct new species. These hybrids should be pretty. 2" - 3"..... **50c**

HAAGEOCEREUS

(Binghamia B & R)

A much misunderstood genus. Britton and Rose described Binghamia with *Cephalocereus melanostele* Vaupel as the type species. Later they saw Haworth's picture of *Cereus multangularis* (Willdenow) Haw., and decided Vaupel's plant was synonymous thus making *C. multangularis* described 100 years earlier the type. To complicate matters they figured *B. melanostele* in color, plate 24 figure 3, but actually pictured *B. acrantha* a different plant calling it a sterile stem, also remarking about the long white hair and bristle-like pseudocephalium (which it does not have) but giving a **correct technical diagnosis**. *B. multangularis* was later found by Mr. Backeberg, at the type locality, and described as a new species: *Haageocereus chosicensis*. Backeberg transferred its synonymy to his *H. pseudomelanostele* found at Cajamarquilla then reidentified *Ceph. melanostele* as the white woolly cereus found above Lima and founded *Pseudoespostoa* on it. Britton and Rose had wrongly identified this plant as *Espostoa lanata* and definitely had not used it in their consideration of Binghamia. Binghamia having been previously used for an Alga, *Haageocereus* stands.

Haageocereus acranthus. A very pretty plant growing to 3' - 8' branching from below, ascending or partially procumbent. Ribs 12-14, low, rounded. Areoles felted with much variation in length of spines. Flowers white. Fine plant for specimens. Each 50c and..... **35c**

Haageocereus multangularis. (*Haageocereus chosicensis* Bkg.) A handsome plant, yellow to an almost orange-red with 18-25 low, rounded ribs and very numerous, fine, stiff, short spines. Flowers white, fruit red quite large, edible. An exquisite plant. 3" - 5" — 50c and 75c. Smaller..... **35c**

Haageocereus Olowinskianus. A pretty species similar to *B. acrantha* with russet brown spines and charming white flowers. 5" - 6" — **75c**. Smaller..... **35c**

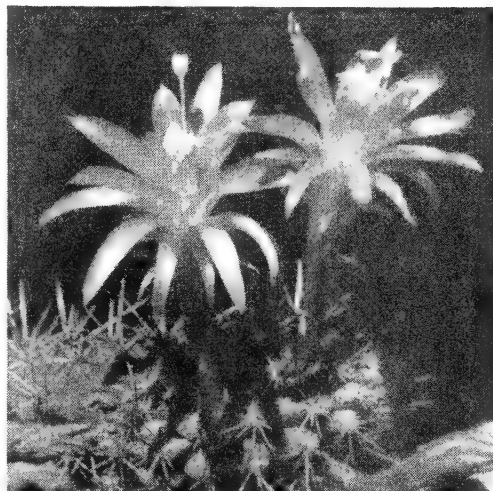
Haageocereus decumbens. Small..... **\$1.25**
Haageocereus superbus. Akers. Small..... **\$1.50**
Haageocereus culebra. Akers. 2" - 4"..... **\$1.50**
Haageocereus aticoensis. Akers. 2" - 4"..... **\$1.50**
Haageocereus caespitosus. 3" - 6" — **75c** and **\$1.50**

Haageocereus stellaspinus. Akers. A much branched plant. 3" - 6" — **75c** and..... **50c**
Haageocereus sp. from Atico. Short branched. 1" - 2"..... **\$1**

MARITINOCEREUS

A small genus from near Chala Peru. Related to *Loxanthocereus* (*Borzicactus Riccoba*.) The flowers are very lovely with a much wider limb than the typical *Loxanthocerei*. They look much like *Aporocactus* except they are a brilliant red. The plants are much branched at the base, prostrate, creeping and turning up at the tips and are found on the bluffs overlooking the ocean. The stems are 1½" - 2½" in diameter, ribs 10-16 low, rounded areoles with some felt. Radial spines about 10-20 acicular, brown or black becoming silvery grey with age, often with an erect or porrect, stouter central. The plants bloom when small, are very free flowering and flower all summer long. It is one of the finest new additions to the window garden.

Maritinocereus gracilis. 8" - 10" — **\$2.50**. 3" - 5"..... **\$1.50**

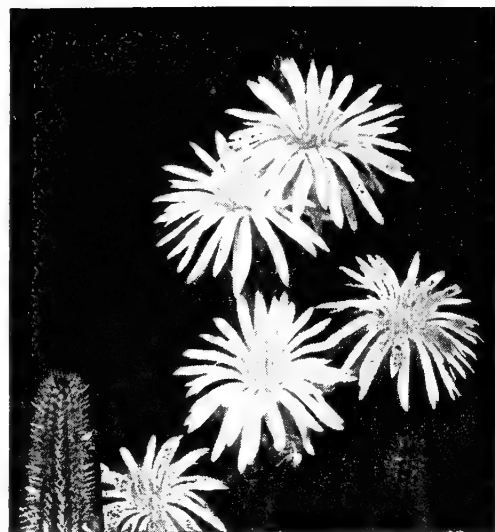


MARITINOCEREUS GRACILIS

This lovely flowering, new cereus is described above. The plants do well in cultivation liking a rich but porous soil and a moderate amount of water during summer. They will stand temperatures at least as low as 27° without injury. Each..... **\$1.50**

Cactus and Succulent Journal

Subscribe to this fine magazine and at the same time become a member of the Cactus and Succulent Society of America. The aim of the Society is to provide a forum for information about these interesting plants. Practical information as well as scientific. Well illustrated published 6 times per year. Membership and Journal..... **\$3**



SNAKE CACTUS

Nyctocereus serpentinus

Beautiful fluted stems thickly starred with red and grey spines. Very easily grown and one of the most pleasing. With me it is always a prime favorite either in flower or for its handsome graceful columns. Deliciously fragrant flowers! Full sun or a well lighted position. Moderate waterings. 4" - 5"..... **35c**

MORAWETZIA

This monotypic genus is from Central Peru. I saw it growing below Mejorado in the Montaro Valley at about 8,000' elevation. There it grew in small clusters up to 18" tall. Stems clavate when mature. It differs from *Oreocereus* for the flowers are produced in a true cephalium and not as sometimes stated simply apical. When it starts to flower the stem ceases to grow in length and becomes swollen producing bristles and spines and long coarse white hairs among which the flowers are annually produced. These are attractive, dark red, tubular 2" - 3" long with small, expanded limb. Fruits quite large, white or yellowish white hidden in the hair until ripe. As in *Pseudoespostoa* not all stems flower.

Morawetzia Doelziana. When available. Each **\$1**

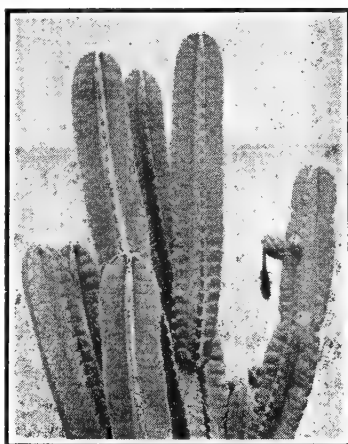
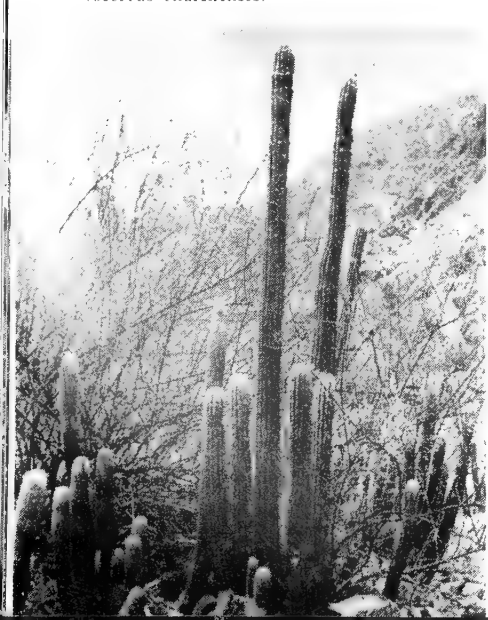
LOXANTHOCEREUS

A central and south Peruvian genus segregated from *Borzicactus* because of the peculiar S-shaped, zygomorphic flowers and the lack of the ring of hairs in the tube. Included in it are plants originally described as *Cereus*, *Borzicactus* and *Erdisia*. Those best known grow in the vicinity of Lima. They are low, erect or procumbent plants with numerous low rounded ribs, proximate areoles with some wool and many short, acicular spines. Flowering areoles often producing tufts of white woolly hair. They flower freely the blossoms of various shades of red and orange-red. They are impatient of too much water and like a porous, well drained soil. Keep dry in winter. Give them a sunny or very light position. Many of those below have not been published by Mr. Akers.

Loxanthocereus aureisetosus. 3" - 5" each **75c**. Smaller **50c**

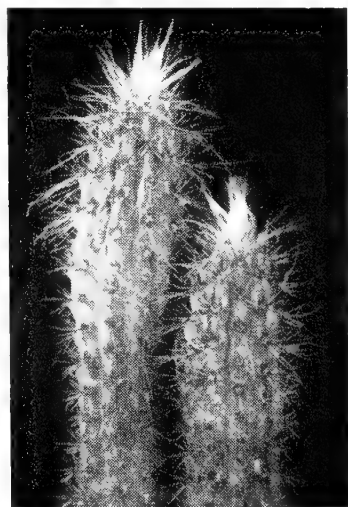
Loxanthocereus eriotrichus. 4" — **75c**. Smaller..... **50c**

HAAGEOCEREUS ACRANTHUS
Habitat photograph from Churin 100 miles north of Lima. Lower plant at left *Peruvocereus churinensis*.



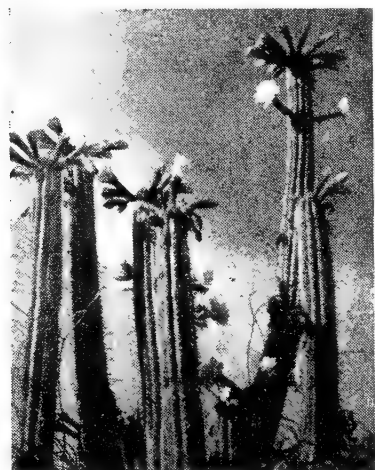
FLOWERING TREE CEREUS

A free flowering specimen plant and pretty large or small. Everyone enjoys *Cereus gonianthus* because of its large, lily-like flowers and handsome, tomato-like fruits, sweet and edible with crystalline pulp. Large plants may be stored during winter in a frost-free basement. 6" - 8" — **50c**. **35c**
Smaller..... **35c**



MORAWETZIA

Bears white wispy hair at the areoles and a true cephalium of long white hair at flowering. Flowers red. Each..... **\$1**



PERUVIAN TORCH CACTUS

A fine, easily grown plant liking generous treatment. *Trichocereus peruvianus* bears large, snowy blossoms. I took this photograph in February in Peru. It is often pendent from the face of a cliff. Grows rapidly. Has withstood temperatures of 20°. 5" - 6"..... **35c**
50c. Smaller..... **35c**

CACTUS BOOKS

These fascinating plants have a most interesting and comprehensive literature. You are missing half the pleasure of this amazing hobby if you do not have these illustrated and instructive reference books to turn to when you want to learn further about your acquisitions or intended purchases. You will learn more about the countries from which they come, about the conditions under which they grow and what other amateurs have learned about them. There has been a greatly stimulated interest in these plants since the termination of the war and many new books have appeared and many more are in contemplation.

Foreign book shipments: Please include 10% extra for extra packing and postage.

CACTI FOR THE AMATEUR

The standard book for the beginner in cactus culture. There are chapters on general culture, potting, growing cacti indoors, outdoor cultivation control of insects, cataloguing and labeling, etc. A simply written book whose aim is to answer all the questions that may bother the beginner. There are 142 pages, 160 illustrations and a color plate with 110 named cacti. Cloth..... **\$3.15**

SUCCULENTS FOR THE AMATEUR

A splendid book introducing you to over 800 succulents. Over 400 kinds are well illustrated, 78 in color. Every collector should have this book to identify many of his unnamed plants. The text well covers the field of culture in all its phases. I thoroughly recommend this book to all collectors. 172 pages, 264 photographs and a fine color plate of 78 species. Cloth..... **\$3.15**

CACTI AND SUCCULENTS

And How to Grow Them

68 pages and many photographs of cacti and succulents. A very useful small book for those beginning a collection of these interesting plants. Easily understood directions on the care of your collection. Postpaid..... **50c**

ORCHID CACTI

EPIPHYLLUM HANDBOOK

A splendidly illustrated new book on these popular plants, many pictures in color. Their history and culture and all about them. 240 pages, 190 illustrations, 11 color plates. Postpaid..... **\$3.95**

SUCCULENT PLANTS

By H. Jacobsen

This revised 1947 edition is the most complete book dealing exclusively with Succulents. Describes 1091 species. Following the chapters on habitat, mode of life and cultural hints the plants are listed in alphabetical order to facilitate quick reference to species. A basically useful book. 277 illustrations, 300 large pages. Cloth, postpaid..... **\$6.15**

THE CULTIVATION OF SUCCULENTS

A splendid book by Europe's greatest cultivator of Succulents, **H. Jacobsen**, Curator of the Botanic Gardens, Kiel Germany. Full notes on the home of Succulents, their growth forms and how they live, uses, cultivation, seed setting and sowing, leaf and cutting propagation, pests, etc. A real guide to Succulent culture. Cloth bound..... **\$1.25**

THE STUDY OF CACTI

By Vera Higgins, M.A., F.L.S.

For those who want to know more about their plants. This is a simply written book, easily understood by the beginner, yet at the same time is technically accurate. Fine chapters on cultivation, on why plants have Latin names, descriptions of cactus genera or groups and classification. If you really want to know the why and the wherefore, this is your book. Revised 1946 edition. Postpaid..... **\$3.00**

MAMMILLARIA HANDBOOK

A complete book about these interesting cacti. 390 pages, 300 fine illustrations and descriptions of all known species. A complete bibliography and annotated list of all published names for the past 150 years. By Dr. Robt. T. Craig. Postpaid..... **\$7.75**

PHYLLOCACTUS (Orchid Cacti)

A fine, sensible book by Curt Knebel on the culture of Orchid Cacti. Propagation, hybridizing, etc., with descriptions of the Knebel hybrids. Paper **\$1.60**

MONSTROSITY AND CRISTATION IN CACTI AND SUCCULENTS

A most interesting book on the causes of monstrose and cristate growth by J. J. Verbeck Wolthys. The problems are discussed and illustrated in a most interesting way. 112 pages. Paper **\$1.00**

THE ALOES OF SOUTH AFRICA

A 650-page monograph by G. W. Reynolds describing 132 Aloes. 572 photos and 70 colored plates. With keys, historical data, early collectors, bibliography, glossary of terms etc. Cloth. Allow 60 days.. **\$14.50**

THE STAPELIEAE

All there is to know about the Starfish Flowers and their allies. 1,233 photos and many colored plates. Three deluxe volumes, 1,200 pages. Buckram binding. Express collect..... **\$12.50**

THE EUPHORBIEAE

A two volume work describing the South African succulent Euphorbias. Many chapters on habitats, biographies of botanical collectors, historical data, complete descriptions, etc. A splendid work beautifully printed and illustrated. 1,000 pages, 1,100 photographs. Express collect..... **\$12.00**

CULTURE FOLDERS

A series of small folders in which I have described the general cultivation of special groups of Succulents, etc.

Stonefaces and other Mimicry Plants. Their culture and other notes..... **15c**

Starfish Flowers. How to care for a collection, propagation, etc..... **15c**

Euphorbias. Their culture and growth..... **15c**

Mexican Succulents. Echeveria, Pachyphytum, etc. Their care..... **15c**

Epiphyllums and other shade-loving Cacti. Their care and flowering..... **15c**

The Set of Five..... **50c**

THE CACTUS GROWERS GUIDE

A new book by Vera Higgins on the cultivation of Cacti and Succulents. It presents in a clear, simple way their care and propagation and their habits, etc. Cloth bound with colored jacket **\$1.35**

THE DESERT MAGAZINE

A most interesting magazine of our southwestern deserts and desert life. Written and edited by the people who live there. Well illustrated with fine articles and stories on the plants, animals and people. If you are interested in natural history you will surely look forward to the day the postman delivers your copy. 12 fine issues..... **\$3.50**

BRAZIL AND ITS COLUMNAR CACTI

A splendid account of a trip through Brazil looking for Cacti by a famous botanist, Dr. Werdermann. Postpaid.... **\$3.15**

SUCCULENT PLANTS ILLUSTRATED

A well-illustrated book on all the groups of Succulents with notes on culture, classification and interesting data. Cloth. Postpaid..... **\$2.50**

GLOSSARY OF SUCCULENT PLANT TERMS

A great help to the student of Cacti and Succulents. Tells how to pronounce their names, their meanings and technical terms used in descriptions. 300 illustrations, 112 pages.. **\$3.65**

THE NATURALIST'S LEXICON

A list of classical Greek and Latin words used or suitable for use in biological nomenclature. A 282 page dictionary with sections on construction of names, terminations, formation of adjectives and participles, formation of nouns, generic and specific names and pronunciation. A very useful reference work for the working biologist and plain curious plantsman who desires to know the "why" of the tools of the trade. By R. S. Woods. Price.. **\$3.20**

MESEMBRYANTHEACEAE

By H. Jacobsen, O. H. Volk, H. Herre. 1950. A revision of the family with generic descriptions, notes on culture, collections, growth forms, etc. This is in German but the lists of genera, species, etc., are invaluable for the student interested in the latest name changes and new species. 128 pages..... **\$2.00**

THE CACTI OF ARIZONA

A full description of the cacti of Arizona with 29 plates some in color, distribution maps and keys. Also a discussion of the problems of naming cacti to bring them into conformity with generally accepted practices in the entire field of botany. Dr. Lyman Benson, the author, is now Professor of Botany at Pomona College. 135 pages cloth..... **\$4.15**

MORPHOLOGY OF CACTI

A study by Prof. Buxbaum of the evolution of the various organs peculiar to the Cactaceae. A valuable contribution to our knowledge of these plants. The first section published deals with the roots and stems. 100 pages, 180 photos and drawings..... **\$2.75**

ARIZONA CACTUSES

By W. Taylor Marshall. 100 pages of descriptions and illustrations of the cacti of Arizona with non-technical keys..... **\$1.10**

CACTACEAE

By W. Taylor Marshall

A very necessary book for the serious student. A critical resumé of the cacti described after the publication of Britton and Rose to 1941. The book is long out of print. Beautifully printed and illustrated. A few copies only. New **\$17.50**

COLORADO CACTI

By Charles H. Boissevain and Carol Davidson. Complete with keys and index. All of the Colorado cacti with fine habitat photos. 75 pages, 46 illustrations and one color plate. Cloth **\$2.15**. Paper **\$1.65**

B.F.K. (Blatter fur Kakteenforschung)

Descriptions in English. The Bulletin of Cactus Research by Curt Backeberg has 460 pages, 250 photos and should be in the hands of every serious cactus collector. Mr. Backeberg's work is well known and here he gives you his original observations and descriptions. Published from 1934-1938 inc. Unbound..... **\$5.00**

TERMS

I GUARANTEE SAFE DELIVERY
ANYWHERE IN THE U. S. OR CANADA

December shipments via express at customer's expense, except for California, Oregon, Washington, Utah, Nevada, Arizona, New Mexico and Texas. These may go parcel post free.

Minimum order \$2.50 for free delivery.

50c packing charge on orders less than \$2.50.

How to remit: By check, postal note, money order or stamps.

No C.O.D. orders accepted.

How we ship: By parcel post, which delivers direct to your door. All plants are passed by State Horticultural Inspectors to insure freedom from insect pests. They are packed by experts in especially made boxes heavily insulated from cold and clearly marked: "Rush—Perishable—Tender Plants."

Our guarantee is for safe delivery. We cannot undertake to make good plants lost through improper care. If plants are injured in transit and we are notified immediately, we will give credit for all damaged items.

SUBSTITUTIONS

Since many of the items offered are in small supply and many cannot be replaced when supplies are exhausted we particularly request customers to give us three or four items for substitution. If we have the item you will get it and the substitutes will not be used.

CACTUS HELPS

COLLECTION \$100

Items to make the growing of your plants easier and more enjoyable. Included here are all the things to root and grow your plants except loam and sand. Sand may be purchased from poultry houses or builders. Loam from garden or hillside.

Book, "Cacti and Succulents and How to Grow Them."

75c package Cactus Compost.

Johnson's Cactus Food.

Johnson's Cactus Soil Conditioner.

Quart of Cactus Hardwood Charcoal.

Bottle of Johnson's B1 Tablets.

50 Painted Wooden Plant Labels.

7 Items to Make Cactus Growing Easy. Postpaid.....\$3.00

CACTUS SEEDS

Many Cacti grow readily from seeds which germinate in from 7 to 30 days depending upon heat and moisture conditions. You will enjoy trying your hand at growing them.

MIXED CACTI SEED

Contains more than 20 kinds of popular Mexican and South American cacti.

Per packet50c

DE LUXE MIXTURE

Superb mixture of over 75 kinds of cacti. Many are rare species collected from our own plants. All are pretty and we flower many within two years. Put up in two packets of fine and coarse.

The collection\$1.00

MIXED LIVING ROCK SEED

A mixture of Pleiospilos, Lithops, Dinteranthus, Argyroderma, etc.50c

STONE FACES MIXED SEED

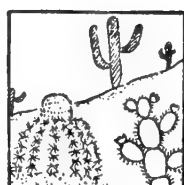
A mixture of Lithops from our large collection. They come up quickly.....25c

MINIATURE CACTI SEED

A choice mixture of the finest toy cacti including Parodias, Mamillarias, Notocacti, Gymnocalyciums, Echinopsis etc.50c

MIXED PINCUSHION SEED

Mamillarias grow easily and are fine subjects to start with. A very pretty selection.....25c



SUPPLIES FOR CACTI

Few things are needed in the growing of cacti more than interest and a desire to form an increasing collection of them. However, for the city dweller and more serious collector I am offering a few things that may make their culture easier. The things we offer are the things we ourselves use.

JOHNSON'S CACTUS FOOD

A very effective fertilizer with a good organic base, the ingredients of which are blended and proportioned to help your plants to make normal matured flowering growth. It is not a soluble fertilizer but should be scattered over the soil, a level teaspoonful to a 4-inch pot, three or four times during the growing season after the plants are well established.

Use only during the growing season. Light applications once a month are more effective than heavy applications.

12-ounce Bag50c

2-pound Bag\$1.00

ROOTWELL

Want to raise Cactus cuttings? Our new hormone powder for rooting refractory cuttings of all kinds designed particularly for quickly rooting Cacti and Succulents. Sterilizes the cut surface and induces luxuriant growth of roots. Apply dry with finger to fresh cut.

Full Directions. Per Package.....50c

JOHNSON'S VITAMIN B1

Works miracles on cacti, often bringing refractory plants into bloom. Don't fail to use this wonder working solution. Our customers report success, particularly when used on old plants. Also to stimulate new root growth after transplanting.

75 Double Strength Tablets, with full instructions for Cacti. Bottle.....50c

CACTUS AND SUCCULENT

SOCIETY OF AMERICA

The Cactus and Succulent Society was organized more than 20 years ago to bring together those interested in these extraordinary plants and to publish a magazine which would provide a forum for the exchange of information and for the publishing of new species and scientific data. The Journal, under the competent editorship of Scott Haselton, has well achieved these aims, and today is the world's foremost publication about these plants.

Everyone is invited to join the Society and to receive this splendidly illustrated magazine. It has many articles on new plants, stories on exploration trips to new localities, articles on culture, news of affiliated Cactus Clubs in every region of the U. S. Everyone interested in Cacti and Succulents will continue to find this a most interesting magazine.

Membership and Journal—
Six double issues a year.....\$3.00

Europe and Africa.....\$3.50

PLASTIC LABELS

Permanent labels for plants poses a very difficult problem for the collector. Wooden labels while quite satisfactory do not of course last indefinitely. These plastic labels last for many years and outside of copper or zinc labels, which are difficult to affix to the plant, are the best solution I have found to date. Lead pencil writing lasts very well indoors or in the greenhouse. Outdoors it eventually weathers off. Grease pencils are useless. Water proof india drawing ink has proven the best medium for permanent labeling.

3 1/2"x1 1/2" Plastic pot labels. Per 100.....\$1.25

4"x5/8". Per 100\$1.50

4 1/2"x7/8". Large, shaped labels for outdoors or pots. Per 100\$1.75

JOHNSON'S CACTUS SOIL CONDITIONER

Of great assistance in keeping cacti in good health, it is designed to add the minerals ordinary garden soils often lack. Desert soils are often high in mineral content, for there is little rain to leach them away. A spoonful of my Conditioner placed about a Cactus plant and stirred lightly into the soil will often bring an ailing one back to health. Mix it with your potting soils.

Small Size, 10 Ounces, Postpaid.....60c

Large Size, 32 Ounces, Postpaid.....\$1.00

JOHNSON'S CACTUS COMPOST

Mix With Your Own Sand and Soil

An economical compost for Cacti and Succulents which when mixed with equal or larger quantities of both sand and light loam makes a very suitable soil for all desert plants. Composed of our cleaned sclerophyllous leafmold, lime, gypsum in the proper proportions for all potted cacti. A light and bulky mixture, the same as we use in our own potting soils for both seedling and specimen plants.

Per Peck, Postpaid\$1.95

4 Pints or 2 Pounds to Make 6-10 Quarts of Potting Soil. Postpaid.....75c

OUR SPECIAL CACTUS LEAFMOLD

A cleaned, sclerophyllous desert leafmold, sifted, light and dry. Mixed with equal parts of both sand and loam, it makes a fine, economical cactus soil.

4 Pints or 2 Pounds to Make 6-10 Quarts of Potting Soil. Postpaid.....70c

HARDWOOD CACTUS CHARCOAL

Useful in keeping cactus soils sweet and aerated. Helpful in heavy soil.

Per Quart40c

CACTUS INSECTICIDES

Our special instruction sheet describing common cactus pests and treatment, with spray formulas. We recommend Red Arrow Spray as effective and non-injurious to cacti or other house or garden plants.

Instruction Sheet and Bottle of Red Arrow Spray. Postpaid40c

VOLCK SPRAY. An oil spray recommended for any kind of scale insect and for mealy bug. These two insects are hard to kill as they have a waxy covering which repels water. We have used it for years, but only recently has it been put up in small bottles. 4-ounce bottle pre-paid (with orders only) with chart describing cactus pests. Full instructions for use.....50c

BLACK ROT PREVENTIVE

With light waterings, fresh air and sun, rot will not appear. If through too much watering plants turn black and watery its spread may be checked by saturating the top soil with a Semesan solution. It is useful also to spray tiny seedlings to prevent "damping off" or rotting.

1/3-ounce envelope, with cactus instructions20c

2-ounce pkg., with cactus instructions.....50c

PLANT CHEM SALTS

Cacti grown in pure sand and watered regularly with this nutrient solution make healthy vigorous growth. An occasional watering of all your house plants will supply the rare minerals sometimes lacking.

16-gallon pkg., with full instructions.....30c

100-gallon pkg., with full instructions.....\$1.10

400-gallon pkg., with full instructions.....\$2.10

[illegible]



ARMATOCEREUS MOCUPENSIS

A giant new species from north Central Peru. Note the strict manner of branching. The trunks are armed with long, acicular, brittle spines. It was in flower and fruit when I took this photograph in March. **75c**

Loxanthocereus eriostichus lanatiflorus. Each **75c**

Loxanthocereus Faustianus. 2" - 3". Each **50c**

Loxanthocereus ferruginospinus. Generally with quite red spines 4" - 5" **75c**. Smaller **50c**

Loxanthocereus matucanensis speciosus. Spines very dark brown to black tipped. 2" - 3" **50c**

Loxanthocereus matucanensis senilis. With more hair. 4" - 5" **75c**. Smaller **50c**

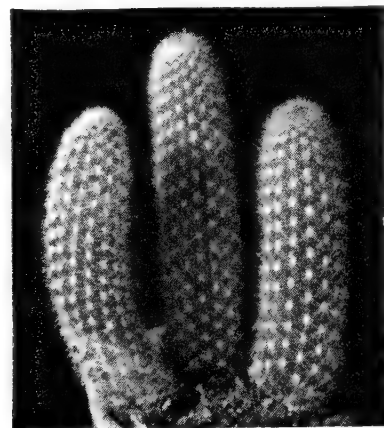
Loxanthocereus paucispinus. 4" - 6" **75c**. Smaller **50c**

Loxanthocereus polygona. Many ribbed. Each **75c**

LOPHOCEREUS

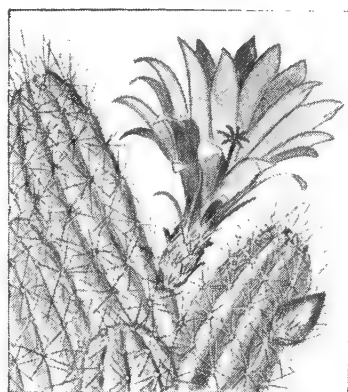
This genus is confined to southern Arizona, Sonora and Baja California. They are columnar plants generally branching from the base, some of the newer species not nearly so robust as the type. Ribs few to many. The flowering areoles produced as the stems get old, are very distinct. They are large and felted and produce few or many long, stiff bristles and more than one small, pink, funnelform, nocturnal flower each. Mature plants are striking. Young plants are rather pretty. Easily grown.

Lophocereus Schottii. This is the one generally seen and the most spectacular of the genus. They may reach 20' though generally are much shorter. They form large colonies and are a typical sight in central Baja California. 5" - 7" each **50c**



PERUVOCEREUS VIRIDIFLORUS

A pretty new species with yellow to golden spines. Charming clustered plants making handsome specimens. Grow well in porous soil with moderate waterings. Each **35c**



ECHINOCEREUS DUBIUS

Handsome purple blossoms of good size opening in June. Plants of soft texture with slim, white spines the areoles borne on broad, low ribs. Stems 5" - 6" pale green and much clustered. Nice plants **50c** and **50c**

LEMAIREOCEREUS

A large genus of tall, branching, tree-like cacti, a few prostrate. Areoles rather large, felted. Spines usually stout, numerous. Flowers diurnal, sometimes nocturnal, funnelform or campanulate. Ovary with scales felted in the axils, at first spineless but soon developing spines. Fruit globular, very spiny, splitting when ripe, often edible. Fruits are sold in the Mexican markets. A fine group of strong, vigorous growing plants tens of thousands of which are sold for dish or window gardens in the United States. They like a rich, porous soil and during the summer a moderate to bountiful supply of water. They prefer a sunny or light situation.

Lemaireocereus Beneckei. This species is generally 5' - 6' tall but may reach 15'. It is a striking plant due to the silvery white, waxy coating of the stems. A handsome species and scarce. Each 6" - 8" **\$1**

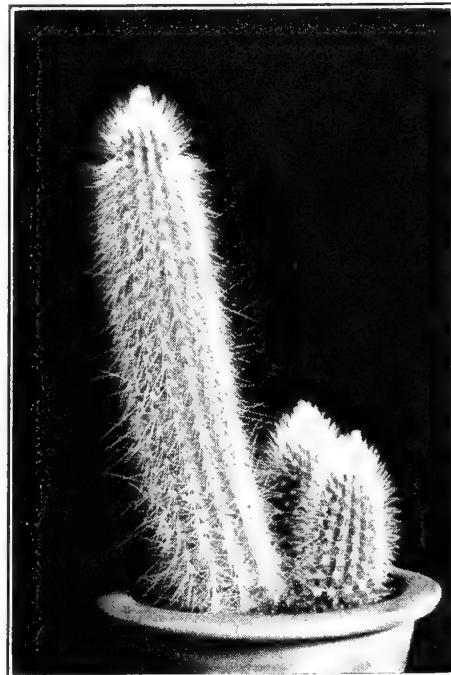
Lemaireocereus chende. A large, tree-like, much branched species. Slow growing. Each **40c**

Lemaireocereus Hollianus. Tall, slim columns. Heavily spined. Used as a hedge plant. Each **35c**

Lemaireocereus pruinosus. Page 20

Lemaireocereus Treleasei. Blooms when only 3' tall. **50c**

Lemaireocereus Weberi. A giant species with a short thick trunk reaching 35' with hundreds of erect arms. Each **35c**



SILVER TORCH

The lovely Cleistocactus Strausii is an arresting plant with its white, glossy columns clothed with silvery-white spines tipped brown. In summer there are quantities of tubular, red blossoms clustered thickly on the taller stems. It is very easy to grow liking a loamy, porous soil with moderate waterings. Sun or part shade. Large 8" - 10" **50c**. Smaller **35c**

WILMATTEA

A monotypic genus growing in the trees about Lake Izabal, Guatemala where I collected it in 1920. Stems long, slender, 3-angled, spines minute. Flowers small, fragrant, nocturnal, pink and white. Scales on ovary naked or with bristles. At first considered a Hyllocereus but the small, short-tubed flowers and presence of bristles in the ovarian scale axils are quite distinctive.

Wilmattea minutaeiflora. Each **50c**

WERCKLEOCEREUS

Two plants from Central America related to Hyllocereus but with spiny ovaries like Selenicereus. One is bushy, one climbing, both with 3-angled stems. Flowers white, short-funnelform: tube and ovary with many areoles bearing black, acicular spines and hairs subtended by minute scales. They do well in cultivation if given a rich but well drained soil and plenty of water during warm weather.

Werck. glaber. Climbing but not a strong grower. Flowers lovely white and green. Free in bloom. Each **75c**

Werck. Tonduzii. Stout and bushy-branched. Flowers white. Rare. **\$1**



MOON CACTUS Eriocereus

These are very free growing cacti and flower abundantly during the summer. The large, snowy blossoms open in the evening and remain open until late next morning. Easy to grow liking a rich loamy soil and during the summer quite a bit of water if in the full sun. Each **35c**

MONVILLEA

A genus of slender, long stemmed, night-blooming cacti from South America. The plants are erect or half-erect, often forming thickets. Flowers white with slender tube and tiny scales on ovary and tube their axils naked. Fruit smooth, reddish, spineless, juicy. The plants vary in appearance some are round stemmed, tall with many ribs, others are slim stemmed with widely spaced areoles the ribs few and depressed between areoles, stems often mottled, spines very short. The Peruvian and Ecuadorian species have shorter-tubed flowers. A new species I found in Peru grew on the banks of the dry water courses with a quite different appearance from those I was familiar with. They flower freely in cultivation and some bear quite large, red fruits. Give them generous treatment.

Monvillea Cavendishii. A free flowering species. Each **35c**

Monvillea diffusa. An Ecuadorian species. **35c**

Monvillea mocupensis. A new Peruvian species with thick, round, blue green stems and short spines. Each **75c**

Monvillea Spegazzinii. Each **50c**

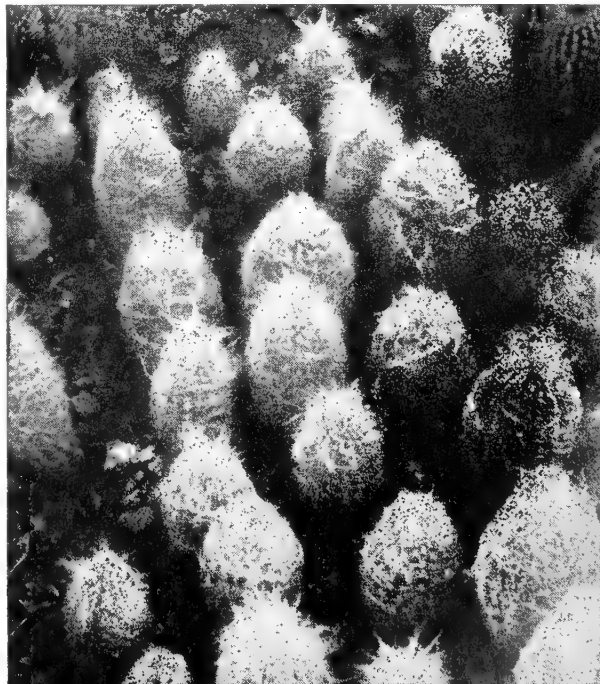
Monvillea phatnosperma var. Grossei. **75c**

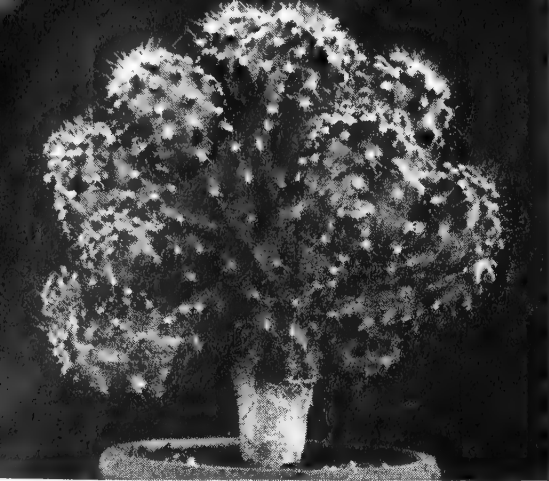
Monvillea sp. Received from Dr. Rose unnamed. A handsome free flowering plant. **75c**

PERUVIAN OLD MAN

Espositia lanata

Snowy white, silken haired plants. A dainty, elegant plant growing easily and fairly quickly. Native to northern Peru. Likes a porous well drained soil and a sunny or light position. **50c** and **35c**





CURIOSITY PLANT

A very monstrose form, of *Cereus peruvianus*. These plants are seedlings and many are even more contorted than the plant pictured. Spines chestnut brown, body dark green. They always retain their curious growth and may reach 5' - 7' in height. They make splendid show specimens, growing slowly. Give them a rich soil and moderate moisture, a light or sunny position. Each 50c and..... **35c**

MEDIOCACTUS

Climbing, generally epiphytic cacti from South America. They look like *Hylocereus*, but are intermediate in character between it and *Selenicereus*. Stems 3-winged, slender, producing aerial roots, areoles short-spiny. Flowers white, quite large, nocturnal, the tube with scales. Fruit bright red its areoles felted and spiny. The branches are quite long and plants are vigorous growers. Give them a rich but porous soil and plenty of water during summer.

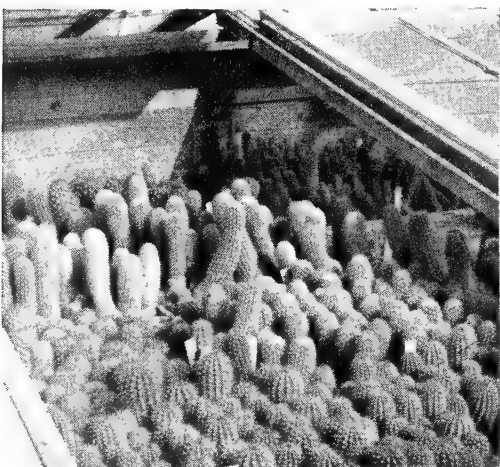
Mediocactus coccineus. The only species in cultivation here-to-fore. A strong growing plant but not very common. Ready 1952. Each **75c**

Mediocactus megalanthus. I found this rare plant growing at Tingo Maria, Peru in the eastern Andes in the valley of the Huallaga River an affluent of the Amazon. Supposedly the largest flowered cactus. A few plants only. Each **\$1.50**

NYCTOCEREUS

Well known to fanciers these Mexican and Central American cacti bear white, sometimes fragrant, nocturnal flowers. The plants are erect or clambering, slender, with cylindric, ribbed stems. Areoles bearing wool, and small acicular spines. Flowers funnellform, bearing scales, and below the middle, tufts of bristles. Fruit spiny. Seeds very large.

Nyctocereus serpentinus. The well known cultivated species. Each **35c**



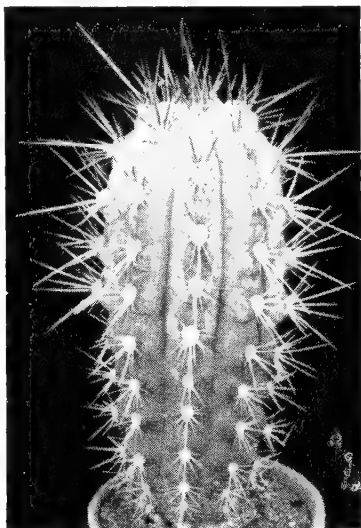
CACTI IN GLASS FRAMES

Tens of thousands of our plants are growing in such frames where light and moisture can be controlled. Young plants are transferred here from the greenhouses where the seeds or cuttings are started. Here, close beneath the glass, they produce a vigorous healthy root system. All soil used is steam sterilized. The plants shown are *Peruvocereus*.

PERUVOCEREUS

A genus recently erected for a group of handsome Peruvian *Cerei* from the western slope of the Andes. The plants are generally 2½' - 4' tall though individual stems may be much taller. They are very brightly spined yellow, tawny red or golden. Some produce quantities of silky hair almost like an *Espostoa*. They make as handsome specimens as any plants I know. They branch from the base forming clusters of 3 - 10 stems. They like a porous, well drained soil with moderate waterings in summer. In winter keep on the dry side. They prefer a sunny or very light position. Those listed are from Mr. Akers' collection and some have not been published.

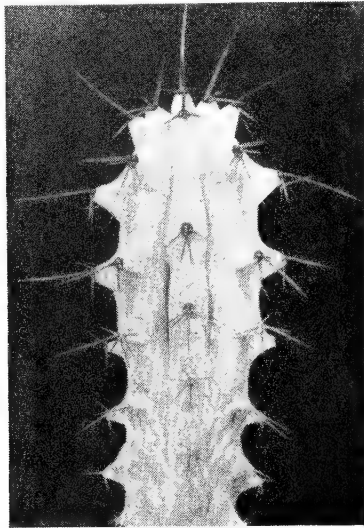
Peruvocereus albicephalus.	75c and.....	50c
Peruvocereus albisetosus.	Each.....	50c
Peruvocereus albispinosus.	Each.....	50c
Peruvocereus albispinosus.	Red spined form.	75c
Peruvocereus churinensis.	4" - 5" 75c. Smaller	50c
Peruvocereus chrysacanthus.	Each 75c and.....	50c
Peruvocereus cajamarquilla.	Each.....	50c
Peruvocereus flavispinus.	Each.....	50c
Peruvocereus lanatus.	.....	\$1.00
Peruvocereus psuedocephaleus.	.....	75c
Peruvocereus rhodoflorus.	.....	\$1.00
Peruvocereus rubrispinus.	.....	50c
Peruvocereus salmonoideus.	Lovely 50c and	35c
Peruvocereus setosus.	4" - 5" — 75c. Smaller	50c
Peruvocereus viridiflorus.	.....	50c



AZUREOCEREUS NOBILIS

A handsome and distinct new *cereus* with blue stems and stout brown spines. It does not branch until it is several feet high. Grows easily liking a porous soil and a sunny position. Will stand 27° when dormant. 5" - 6" **\$1.50**

\$2. 4"



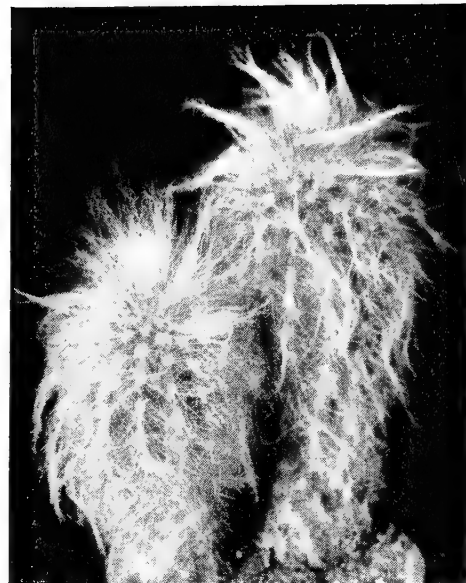
LEMAIREOCEREUS BENECKEI

A lovely white stemmed Mexican *Cereus*. The cutin is covered with a white powdery wax. The rounded ribs bear raised areoles with black spines. Flowers white. Give it a porous soil, a sunny position and moderate waterings. 6" - 8" **\$1**

TRICHOCEREUS

A large South American genus varying from low, cylindric, cespitose or prostrate plants to tall branched trees. Ribs few to numerous, low. Areoles with or without hair usually spiny. Flowers white, pale pink, yellow or red, large, nocturnal, funnellform. Flower tube and ovary bearing numerous scales, their axils with long hairs. Fruit without bristles or spines, green, yellow or reddish. South western Peruvian and Chilean species with narrow flowers and often white-woolly areoles. Fine plants for the fancier either for the window garden or in mild climates for the outdoor garden. Most of them will stand temperatures of 20° without injury. Give them a rich, porous soil and during summer a good supply of water.

Trichocereus Bridgesii.	8" cuttings.....	\$1.00
Trichocereus candicans.	A cespitose, bright green, plant to 12" or so tall freely bearing many white blossoms. Stands considerable cold. 4" - 5" beginning to cluster. \$1. Smaller 50c and.....	35c
Trichocereus candicans robustior.	A long reddish-brown spined plant of large growth. 6" - 8"	\$1.25.
Smaller	.....	50c
Trichocereus sp. nova.	From near Cora-Cora, Peru. White woolly areoles.....	75c
Trichocereus chiloensis.	Each.....	\$1.00
Trichocereus cuzcoensis.	Tall blue-green stems. Very large flowers. 3" - 4"	50c
Trichocereus fascicularis.	A tall species from Arequipa, Peru.....	50c
Trichocereus gladiatus.	A form of <i>T. candicans</i>	50c
and	.....	35c
Trichocereus huancayensis.	A form of <i>T. peruvianus</i>	50c



ESPOSTOA MOCUPENSIS

A new *Espostoa* with reddish spines and white wool. A very attractive plant and a fairly fast grower. Of more slender and taller growth than *Espostoa lanata* and with fewer branches. Native to the dry Andean valleys above Chiclayo, Peru. Each species of *Espostoa* seems to be confined to a narrow altitudinal band which is often true of many cacti. Temperature may be the determining factor but probably temperature and moisture together are the determinants. 3" - \$1. Smaller, Each..... **75c**

Trichocereus huanucoensis. A new species I found in central Peru. Growing to 15' or more the large branched plants are almost spineless the stems 4" - 5" in diameter. Large white flowers. Each **50c**

Trichocereus huascha (Lobivia huascha). Lovely yellow to red flowers. Large 5" - 6" beginning to cluster. \$1. Smaller..... **50c**

Trichocereus Knuthianus. A tall growing species. Cuttings..... **\$1.50**

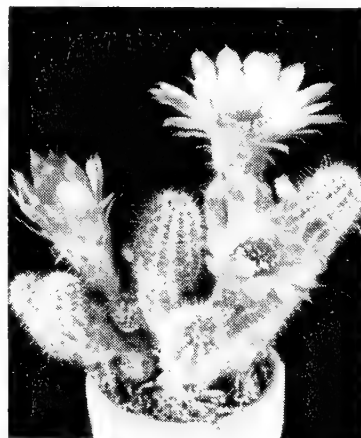
Trichocereus litoralis. Tall tree-like. Cuttings **\$1.25**

Trichocereus macrogonus. Large stemmed. Cuttings..... **\$1.25**

Trichocereus Pachanoi. Almost spineless. Tall. A wonderfully free bloomer. Flowers immense. Cuttings. **\$1.00**

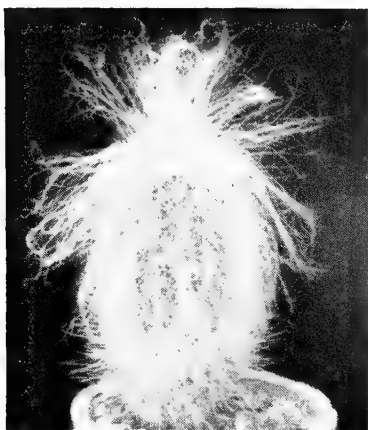
Trichocereus peruvianus. Tree-like. 50c and..... **35c**

Trichocereus purpureopilosus. Cespitose. **50c**



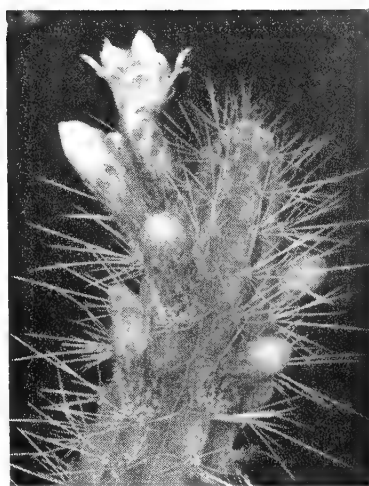
CHAMAECCEREUS FLAME Hybrid Peanut Cactus

Hybrids between *Chamaecereus Sylvestrii* and *Lobivia aurea* are very pretty and have considerable advantage over the old favorite Peanut Cactus. Our first hybrids were produced in 1937 but I failed to recognize their real worth. The one pictured is from the first batch of seedlings. It flowers far more consistently and freely than the species with a larger, more orange blossom and is a stronger grower with thicker stems. Mr. Andrea has produced a whole series from yellow to scarlet. **75c**



ESPOSTOA HUANUCOENSIS

This lovely new species has snowy, long hair and pale yellow spines which give the plant a delicate yellow tinge. A stouter plant than the others. It comes from the eastern valleys of the Andes. Each \$1. Smaller..... **75c**



BORZICACTUS

The Borzicactus of central and northern Ecuador may possibly all be varieties of *B. sepium*. The bright red blossoms are very pretty. The plants branch from the base and grow easily liking a porous soil with moderate waterings. Each..... **50c**

PSUEDOESPOSTOA

A monotypic genus erected to describe the white haired plant found near Lima, Peru. Separated from *Espostoa* because of its branching only from the base and its shiny seeds. The *psuedocephalum* is more abundant than in other *Espostoas* and stained a rich rusty red. A similar plant is found 100 miles north of Lima, with long reddish central spines, apparently only a geographical variation.

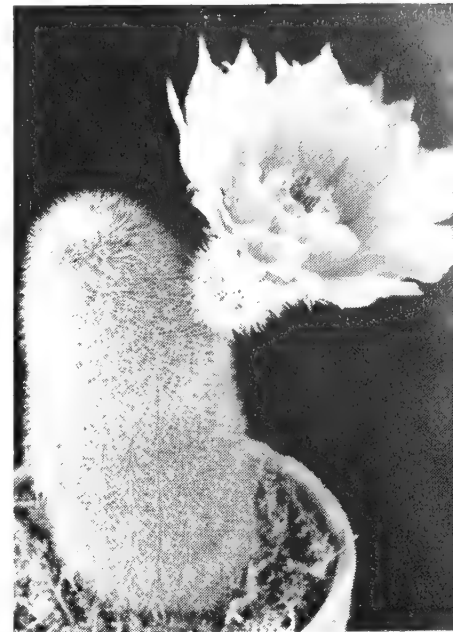
Psuedoespostoa melanostele. See Snowball cactus illustrated below.

WEBEROCEREUS

Slender, climbing or pendent epiphytic cacti. Stems terete, angled or rarely flattened emitting aerial roots, areoles bearing felt or long hairs and with or without acicular spines or bristles. Flowers pink or white, nocturnal, short-funnelform or campanulate; ovary tuberculate its areoles bearing weak bristles or stiff hairs. Fruit bristles or stiff hairs.

Weberocereus Biolleyi. Less than pencil-thick. Pink flowered..... **35c**

Weberocereus trichotus. A very distinct white-hairy and spiny new plant with dark pink flowers. Each..... **35c**



ECHINOCEREUS DASYACANTHUS

A large solitary plant freely producing its handsome yellow blossoms. The blossoms are so large as to startle one as they are 4"-5" across. The color varies from pale yellow to yellow with a touch of orange, the petals with a faint green midstripe. The plants in cultivation sometimes branch. The spines are very close and short, the tips tinged red. Sunny location and quite sandy soil. Easily grown. Large 5"-6" **75c**. Smaller blooming plants..... **50c**

Trichocereus santiaguensis. Large flowered..... **35c**

Trichocereus Shaferi. Short stemmed, cespitose. Flowers very large. Fine plant. 4" - 6" **75c** to \$1. Smaller..... **50c**

Trichocereus Schickendantzii. Low growing, forming compact clusters. Large white flowers. **75c** and..... **50c**

Trichocereus strigosus. Clustered short stems. **50c**

Trichocereus thelegonus. A creeping or prostrate long-stemmed plant. Large white flowers **75c**

Trichocereus thelegonus X Echinopsis...... **50c**

Trichocereus uyupampensis. 1952..... **\$1.50**

Trichocereus Werdermannianus. A huge species. **\$2.50**

Trichocereus arequipensis. A white woolly giant from below Chala, Peru. A very large plant. Probably is not a *Trichocereus*. Small. **\$2.50**

NEORAIMONDIA

A strange Peruvian cactus found all over the western Andean slopes. Stems 3' - 15' stout, branched near base, strict, with few ribs, spiny. Areoles brown felted, some with extremely long spines, the flowering areoles producing flowers for many years growing in length to several inches. Flowers funnelform with stout tube longer than the limb. Scales of tube and ovary with brown wool. Fruit ellipsoid or globular the globular areoles with wool and spines.

Since they grow in very dry regions they need a very porous soil and attention to watering. Keep dry in winter.

Neoraimondia macrostibas. Scarce. 2" - 3" **\$1.50**

OREOCEREUS

These handsome and interesting plants are from southern Peru, Bolivia and northern Chile. Branching from the base, procumbent or upright some recently described species quite tall. Stems strongly ribbed, the areoles with long, wispy, coarse white hair and stout, curved, often reddish-yellow spines. Flowers slender, elongated, curved, red, diurnal. Filaments and style exerted. Ovary and flower tube with long, narrow scales and long, black and white hairs. Fruit globular, spineless, dry. They are related to *Morawetzia* and more distantly to *Cleistocactus*. Splendid plants much prized by the fanciers. They are easy to grow and will take temperatures as low as 20° without injury if dormant.

OREOCEREUS NEOCELSIANUS. A tall, stout species with red-brown spines and long white hair. Scarce. Small..... **\$1**

OREOCEREUS TROLLII. A smaller, clustering species with considerable cottony white hair. Small..... **\$1**

MYRTILLOCACTUS

A Mexican and Guatemalan genus of short-jointed, much branched cacti. The stout branches are few-ribbed with short, stout spines. Flowers more than one at an areole looking like Myrtle blossoms, followed by small red berries. A pretty and very distinct genus making fine pot or garden plants. They have a heavy tap-root. Easy to grow.

Myrtillocactus geometrizans. Blue Myrtle Cactus. Page 20.

Myrtillocactus cochal. Ready 1952..... **35c**

Myrtillocactus Schenkii. Each..... **50c**



SNOWBALL CACTUS

Psuedoespostoa melanostele

Plants are pure white with soft cottony hair. It grows rather slowly but retains its whiteness. Where it grows wild it gets but little rainfall. Scarce in cultivation due to the difficulty of getting seeds. A charming specimen plant. 2" - 2½" specimens 4 years old \$1. Smaller — **50c** and..... **35c**

ECHINOCEREUS

The Echinocerei are the North American counterparts of *Echinopsis* and *Lobivia* belonging also to the subtribe *Echinocereanae*. Plants are low, erect or prostrate, single or cespitose, globular to cylindric. Flowers usually large, diurnal or nocturnal, perianth campanulate to short funnelform, scarlet, crimson, purple, pink or yellow, the tube and ovary always spiny; stigma lobes always green; fruit thin-skinned, juicy, spiny, the clusters easily detached when ripe.

A large group of small cacti the species difficult to identify as many species could better be thought of as geographical variations around a type. If one collects over a large area many plants intermediate between two otherwise different species will be found. The more specimens brought together the more difficult it becomes to maintain some of the older species as entities. This is true of many other cacti. From the fancier's standpoint this certainly does not detract from the beauty or interest of the divergent forms. The old names are handy to identify the particular plant. The botanist of course has an entirely different

aim as he is simply trying to establish relationship. That is the sum and substance of that branch of botany termed taxonomy. It is not an occult science nor yet an exact science simply one of common sense.

Echinocereus amoenus. A small, solitary plant, globular with low ribs and short few spines. Flowers very bright pink. Charming. Scarce. Mature Mexican imports. Each..... **\$1**

Echinocereus australis. Scarce..... **\$1**

Echinocereus dubius. Clustering with stems to 6". Lovely purple flowers. **50c** and..... **35c**

Echinocereus Englemannii. Small..... **35c**

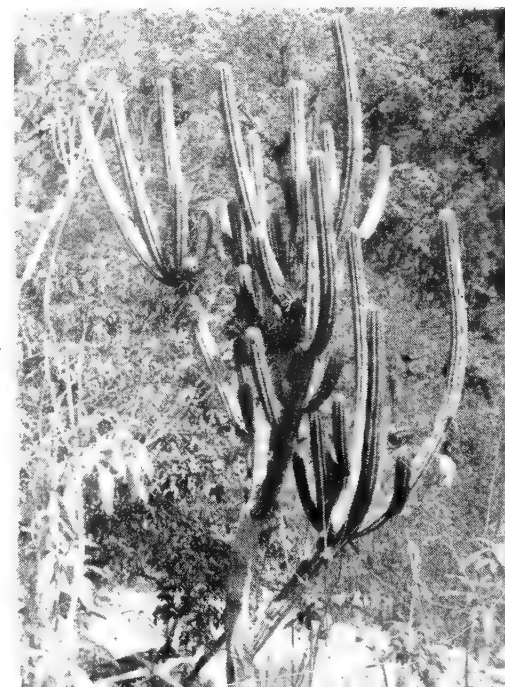
Echinocereus Fendleri. Pale pink..... **40c**

Echinocereus Knippelianus. A fat, almost entirely spineless small plant with charming pink blossoms. **75c**

Echinocereus longispinus. Long, pale yellowish spines and large, light purple blossoms. Should stand much cold probably zero. **75c** and..... **50c**

GYMNANTHOCEREUS

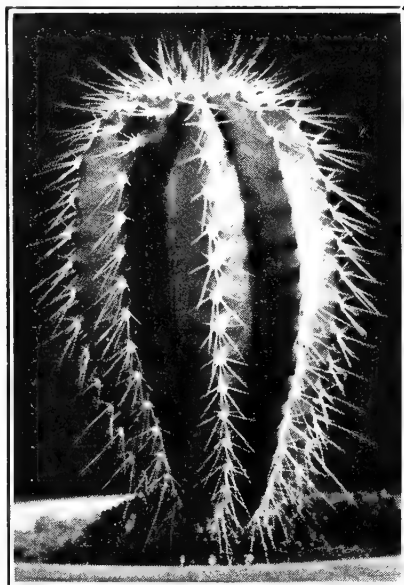
A habitat photograph of a species I collected above Chiclayo. This may be *G. chlorocarpus* or perhaps a new species. It bore a few scraggly, stiff bristles at the flowering areoles. Flowers white, nocturnal; fruit green, ovoid, with scales. The identity of plants originally distributed as *G. chlorocarpus* (*Cereus* H.B.K.) is obscured by a recent statement that it is known only from literature. Not available.





TRICHOCEREUS SCHICKENDANTZII

A beautiful white flowered plant which quickly grows into a many-headed cluster of fat, green stems with numerous low ribs and short brown spines. An old favorite thriving under various conditions. Plants each 75c and..... **50c**



AZTEC COLUMN

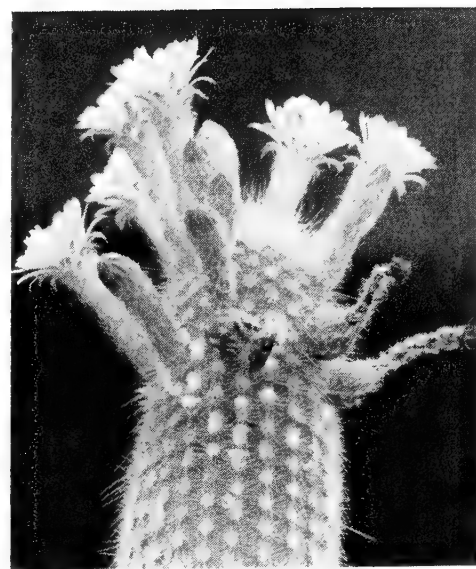
A very stately, columnar plant. Cephalocereus polylophus is distinct from other Cephalocereus (Pilocereus) in its flowers which are very short-tubed and red and in the great number of ribs, up to 40. It is a handsome plant and a good pot specimen. 4" specimens 75c. Smaller 50c and..... **35c**

Echinocereus maritimus. A low clustering species from Baja California. Flowers yellow. 6" rooted cuttings.....50c
Echinocereus Merkeri. Clustered; long white spines, purple blossoms.....50c
Echinocereus octacanthus......50c
Echinocereus "pabilllo." Small clustered; purple flowers.....50c
Echinocereus pectinatus castaneus. Solitary with short pectinate spines which become rather highly colored, pink, purplish and yellow. Large, purple pink blossoms. Each 50c

Echinocereus dasyacanthus. Produces immense yellow blossoms 4" - 5" across! Solitary with close-set, short, pinkish-yellow spines. Easy to flower and should stand 10° or less. Large specimens 5"-6" —75c. 4" - 5".....50c
Echinocereus Fitchii. Handsome, large, ruffled, pink blossoms. A fine solitary species. Flowering 50c and.....35c
Echinocereus papillosus. Very large yellow blossoms with reddish throat. A fine, easily flowered species. Stands 20° or less.....40c
Echinocereus polyacanthus. Clustered; crimson flowers. Pretty.....50c — 35c
Echinocereus pulchellus. Small, globular, Mexican plants with charming pink blossoms. Scarce. Mature plants.....\$1.00
Echinocereus Reichenbachii. Large purple-pink flowers.....25c
Echinocereus Salm-Dyckianus. Flowers red.....50c
Echinocereus sarrisophorus. Purple flowers.....50c
Echinocereus Scheerii. Clustered. Flowers large, purple.....50c
Echinocereus sciurus. Rare.....75c
Echinocereus stramineus. Purple blossoms. Rather hardy. 50c and.....35c
Echinocereus triglochidiatus. 1". Ready 1952 35c

RATHBUNIA

Mexican plants with narrowly tubular, zygomorphic, red flowers. Slender, erect or clambering; ribs few with subulate spines. The flower tube bears long scales free only at the tips. Ovary with small scales bearing short felt and sometimes spines. Fruit spiny or becoming smooth. **Rathbunia alamosensis.**.....75c



PERUVOCEREUS SALMONEOIDES

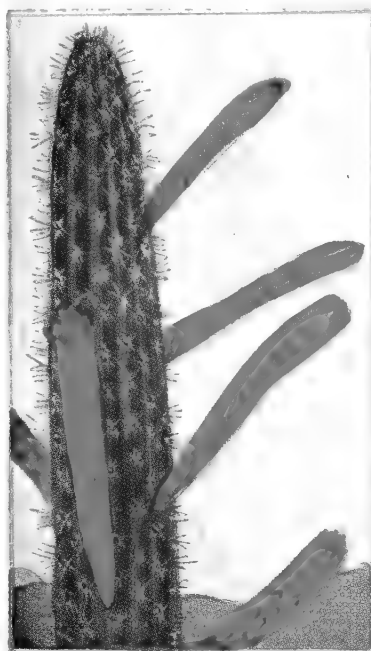
Photo by John Akers taken in Peru. These plants are beautiful in flower as well as being brightly spined. Fruits are large, light red and thin skinned. Many of the species produce matted white wool at the flowering areoles. A richly colored plant. 50c and..... **35c**

MACHAEROCEREUS

Two species from Baja California. **M. eruca** is prostrate, **M. gummosus** bushy. Ribs low; areoles large, felted, with many spines, in **M. eruca** centrals very flattened. Flowers white, diurnal, seldom produced even in the wilds, slender-funnel-form; ovary and lower tube with many small scales subtending felted areoles which bear spines on the ripening fruit. Pulp crimson.

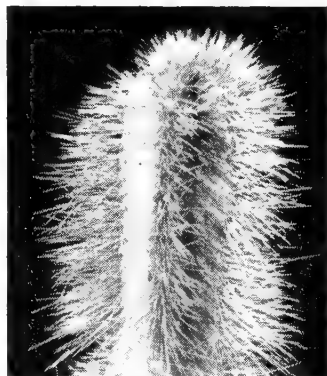
Plants should not be over-watered and prefer a porous, well drained soil. Give them a sunny location.

Machaerocereus eruca. A very scarce plant. Creeping flat on the ground with the tip raised. As available 4" - 6".....\$1.50
Machaerocereus gummosus. Forms thickets. Ready 1952. 50c



CLEISTOCACTUS BAUMANNII

The Scarlet Bugler is one of the freest flowering of small Cerei. The flowers and even the buds are bright red and it blooms up and down the sunny-side of the stem for months. 12" - 15" 75c. Smaller..... **35c**



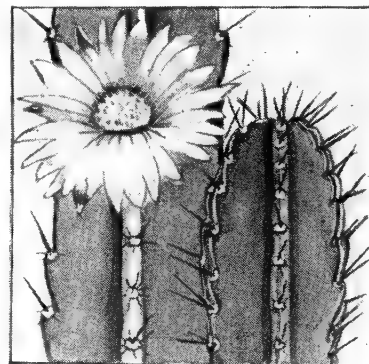
LOPHOCEREUS SCHOTTII

Showing the striking, bristly tip of a flowering stem. Small plants do not bear bristles. 5" - 7"..... **50c**

THRIXANTHOCEREUS

A monotypic genus of North Peru closely related to Facheiroa. The plants are erect, solitary or with few basal branches, up to 3' tall. Ribs 18-25 rounded; areoles with hair and wool; spines up to 25 with one porrect central. Flowers from a lateral pseudocephalium composed of stiffish, red or black bristles intermixed with wool. Flowers white, nocturnal, funnel-form. A very striking plant when the cephalium is developed. Give it a rich but porous soil and a moderate amount of water. Keep on the dry side in winter. Likes a sunny or light position.

Thrixanthocereus Blossfeldiorum. Rare. 4" each..... **\$2.00**



CEREUS MILESSIMUS

A handsome tree cereus with many strict branches. Flowers white tinged red on the outer perianth segments. Fruits red, large, sweet. It likes a rich soil and moderate waterings. 50c and..... **25c**

BOWL COLLECTION. No. Z3. Five interesting plants for a dish garden..... **95c**

STAR CACTUS

Handsome yellow blossoms. Plant spotted with many white dots. Easily grown.....25c

STONE FACE

These Lithops closely resemble beautifully marked pebbles. Quite rare. Each 30c

OX TONGUE

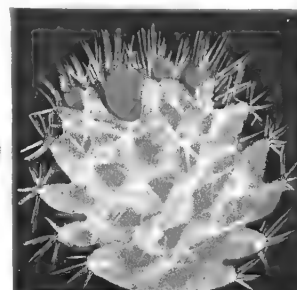
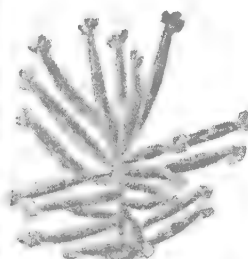
Handsome Gasteria with spotted leaves. Tall spikes of pink blossoms.....30c

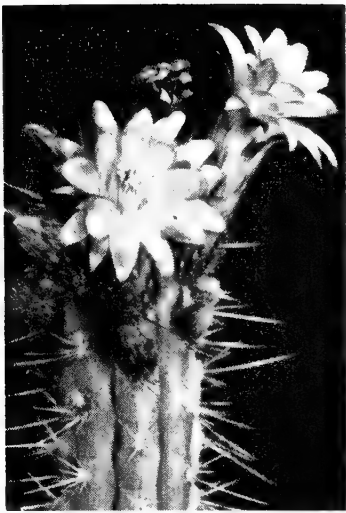
AIR PLANT

Grows young plants on the tips of its leaves! Red bells at Christmas.....25c

DUMPLING CACTUS

Fine for small gardens for it bears many red blossoms when small. Nice.....25c

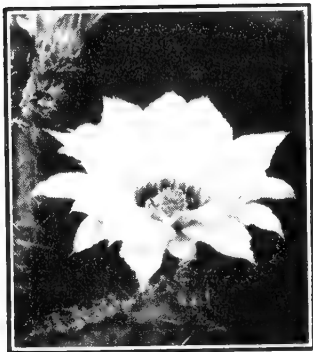




BORZICACTUS SEPIUM

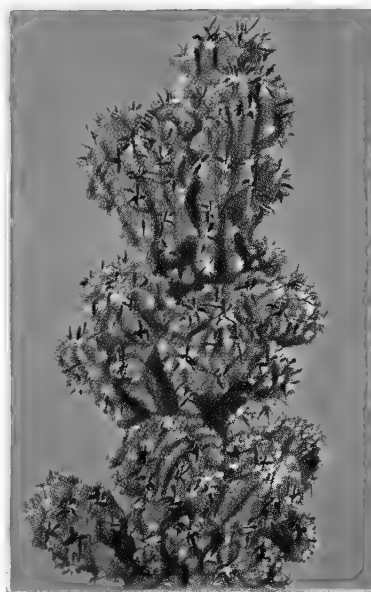
This very lovely species bears bright red blossoms in the spring. It produces its flowers freely on the upper parts of the stem in long succession. I found them in widely separated localities in Ecuador; near Banos, Ambato, Otavalo, Chota and the Equatorial Monument. Wild plants are thicker stemmed and heavier spined than cultivated plants. Rich but porous soil and a sunny situation.

Each..... 50c



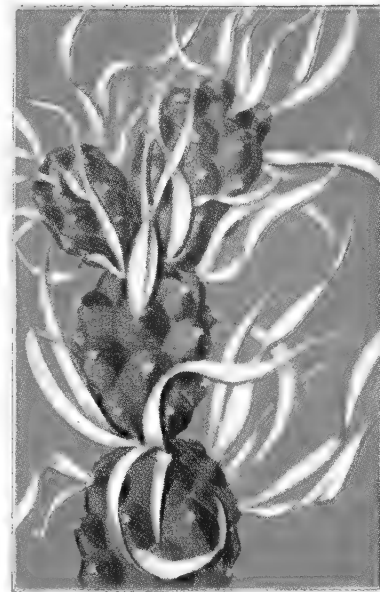
ECHINOCEREUS PAPILLOSUS

Pale yellow blossoms often with a red stain at the base of the petals. The flowers are quite large up to 3" in diameter and are borne in April and May. It blooms freely after a good winters rest and has stood temperatures of below 20° without harm. It is native to western Texas. Give it a porous but reasonably rich soil and a light position. In the winter resting period this species and others of the cespitose, soft stemmed Echinocerei often become flaccid. This should not cause alarm as in the spring they will plump up when the buds begin to show. A good place to winter such plants is in a frost free basement or attic as they will need little attention. Each..... 40c



Cereus Hybridus Monstruosus

A strange and monstrous cactus attracting the attention of all who see it. They grow more upright than the Curiosity Plant and soon form most unusual specimens. As easy to grow as any cactus and never lose their peculiar manner of growth. Fine plants 2" to 3" each..... 50c



PAPER SPINE OPUNTIA

An odd cactus with papery, white ribbons for spines! Tephrocactus glomeratus is from Argentina and belongs to the Opuntias. The joints come apart easily and each will root if planted in sandy soil in a sunny location. Give moderate waterings in summer. Less in winter. Each 35c and..... 25c

SETICEREUS

A genus segregated from *Borzicactus* because of the bristly head on its flowering stems. This head is composed of stiff brush-like bristles which spread laterally in all directions and among which the flowers are borne. The long tubular flowers are compressed, the tube and ovary with scales bearing long gray hairs. Due to the unfortunate remarks of Britton and Rose following their description of *Binghamia melanostele* recent authors have been led to confuse *Binghamia* as embracing these bristly headed plants.

Seticereus Humboldtii. Rare.....\$1

Seticereus icosagonus. Small.....\$1

PACHYCEREUS

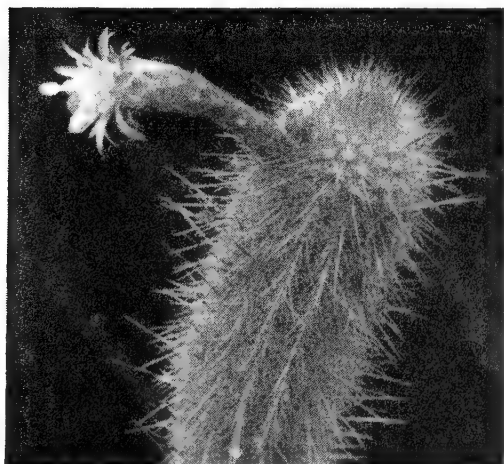
Usually very large plants with definite trunks; stems and branches stout, columnar. Flowers diurnal, short tubed, perianth segments short spatulate; stamens included, numerous, inserted along throat; style included; ovary and flower tube covered with small scales bearing felt and bristles in their axils. Fruit large, dry, usually densely covered with clusters of deciduous spines and bristles. Seeds large and black. Mexican tree cerei with one species from Guatemala. They are known to reach 60' in height. Handsome as pot specimens.

Pachycereus marginatus. See *Lemaireocereus*.

Pachycereus grandis. Scarce. 6" - 8".....\$1.25

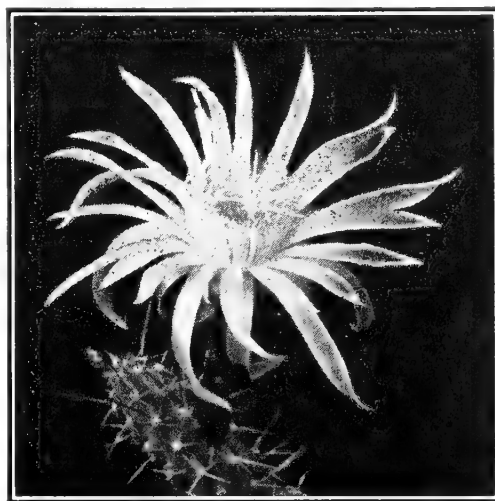
Pachycereus pecten-aboriginum. 4" - 5" 50c and 35c

Pachycereus Pringlei. See page 21. 50c and 25c



LOXANTHOCEREUS AUREISETOSUS

These small Cerei from the coastal regions of Peru are charming with their lively red or orange blossoms and tawny spines. They are rather small to 18" often with several stems. Water only moderately. Keep dry in winter. 3" - 5" 75c. Smaller 50c



BRAZILIAN ROCK CACTUS

Monvillea Cavendishii

A thoroughly worthwhile cactus for those who like flowers. Blooms freely throughout the summer months. Flowers followed by crimson fruits. Very ornamental. Rich loamy soil moderate waterings, sun or part shade. Each..... 35c

SELENICEREUS

Climbing or clambering, slender, elongated Cacti, the joints ribbed or angled giving off aerial roots; areoles small, bearing small spines. Flowers often very large, nocturnal, flower tube elongated; scales on tube and ovary small usually with long felt, hairs and bristles in their axils; outer perianth segments and upper scales similar, narrow, often brightly colored; inner segments broad, white; filaments long, weak, in two distinct clusters; style elongated, thick, often hollow. Fruit large, reddish, covered with spines, bristles and hairs. The night blooming Cerei are well known and beautiful flowering plants largely epiphytic, climbing in trees or on rocks.

Selenicereus coniflorus. Spiny stemmed. Free flowering..... 50c

Selenicereus Donkelaarii. I collected this interesting species from the very platform the maidens were thrown from into the Sacred Well at Chichen Itza, Yucatan..... 75c

Selenicereus hamatus. Ready 1952..... 75c

Selenicereus hondurensis. Each..... 75c

Selenicereus MacDonaldiae. Queen of Night. 40c

Selenicereus Maxonii..... 75c

Selenicereus Murrillii..... 75c

Selenicereus pteranthus. Princess of Night. 40c

Selenicereus spinulosus. Pink..... 50c

Selenicereus Urbanianus..... 75c

Selenicereus Werklei. Short, slender, spineless stems. White, red throat..... 50c

HYLOCEREUS

Climbing cacti often epiphytic, stems elongated, 3-angled with aerial roots, the areoles with felt and short spines or spineless. Flowers very large, nocturnal, funnelliform with wide limb; ovary and tube with large, foliaceous scales but with no spines or wool; outer perianth segments often brightly colored, inner segments acute, mostly white, rarely red; stamens many in two series; style stout, stigma lobes simple or branched. Fruit large, spineless, with persistent scales, red, edible. Magnificent flowering plants easily grown. Give plenty of water in summer.

Hylocereus ocamponis. White stemmed. Outer petals red-laced..... 75c

Hylocereus bronxensis..... \$1

Hylocereus calcaratus. Spineless, the ribs strongly lobed. A curious plant. Each..... 75c

Hylocereus costaricensis. Large growing. Scales and outer perianth segments laced with red..... 75c

Hylocereus extensus. Slender, spiny..... 60c

Hylocereus guatemalensis. Rare..... \$1.00

Hylocereus peruvianus. Long tubed, white flowers. New..... \$1.00

Hylocereus undatus. Huge white flowers. 75c

Hylocereus sp. No. 1. Green stem. Outer segments margined red..... 75c

Hylocereus sp. No. 2. Green stem. Flowers cream..... 75c

Hylocereus sp. No. 3. Green. Flowers white. 75c

Hylocereus sp. No. 4. White stem..... \$1.00

MOON CERUS

Eriocereus Martinii. A free blooming species. Fruits bright red..... 35c

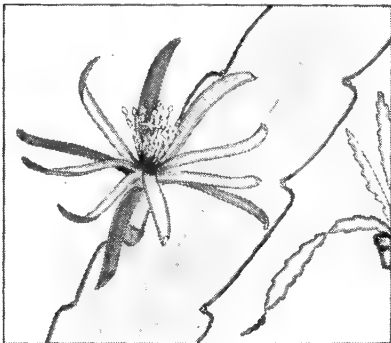


RHIPSALIS



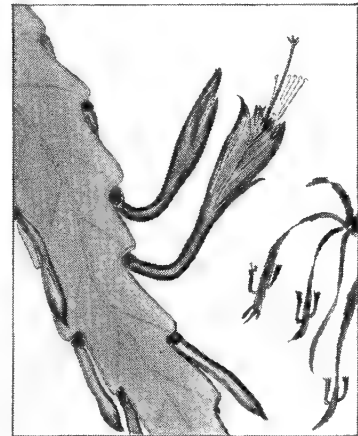
SNOWDROP CACTUS

Rhipsalis Houlettiana was first brought to France from Brazil almost 100 years ago. It is a mountain forest species growing at an elevation of about 4000' perched up in the trees. The stems are wirey at the base but expand into a flat, very thin blade. The pretty bell-shaped blossoms are creamy white. Give plenty of water at all times. **50c**



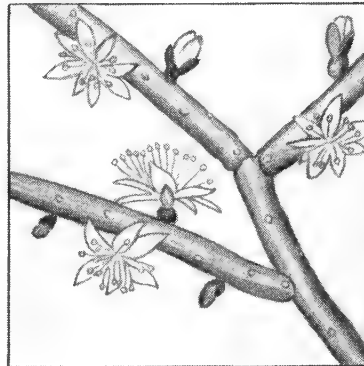
LINK CACTUS

Rhipsalis paradoxa is a curious cactus from Brazil. The stems may reach several feet in length and hang down branching as they go. They are 3-angled but reverse at each node like the links of a chain. Give them a rich but porous soil and moderate to generous waterings. Each **50c**



DISOCACTUS EICHLAMII

A fragile and charming plant from Guatemala. The narrow, tubular flowers are brilliant red. The branches are basal, expanded, thin, pale green, pendant and bear an upright flower at each crenation. Very floriferous. Likes a cool moist situation with some shade. A porous, leafmold soil and plenty of water. **75c**



RHIPSALIS GRANDIFLORA

A round stemmed, vigorous plant from Brazil. At first the plant is upright but becomes pendulous. The stems are dark green to reddish and branch mostly at the tips generally into three branchlets. Flowers large, cream colored. Each **40c**



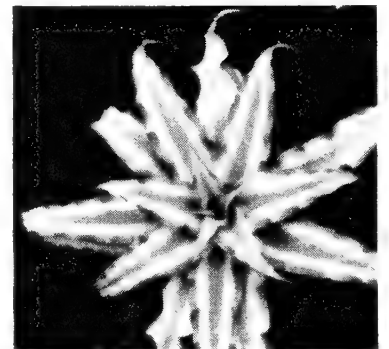
RHIPSALIS CRISPATA

The new branches are bronze colored the older leaves pale green. More or less upright in growth and becoming quite branched. A Brazilian species with creamy white flowers. Very pretty. Each **35c**



PUYA ALPESTRIS

This Chilean Puya has striking, large, metallic-blue blossoms in tall spikes containing scores of blooms. The plants are very ornamental, the leaves green above and silvery beneath. Fine as a pot plant or for planting out where temperatures do not fall below 20°. Very easy to grow. Each **35c**



CRYPTANTHUS ROSEA-PICTA

A very pretty plant with brightly striped leaves in pink and bronze. Likes a light but not too sunny position. Sand, leafmold and a little loam makes a good potting mixture. Each **50c**

PEPEROMIA

A group of tropical plants belonging to the Black Pepper family. Some are very pretty window garden plants, often with variegated or striped succulent leaves. Some have transparent "window" leaves.

Peperomia obtusifolia. Leaves shining green. Each **35c**

Peperomia sp. Leaves thick, triangular in section with the upper edge a transparent window. Peru **35c**

CEROPEGIA RADICANS

A thick stemmed trailing plant with cordate, green leaves. The flowers are charming, tipped green with bands of chocolate and white. Sandy soil, not too much water. Each **50c**



PROPAGATING HOUSE

View in one of our propagating houses where seeds and cuttings are started and young plants established before putting in outdoor frames. Most cacti are grown from seeds though many of the more common kinds are propagated by cuttings.

CRYPTANTHUS

Small Brazilian Bromeliads forming pretty rosettes of striped or colored leaves. Give them a sandy soil with leafmold, a light position and during summer plenty of water, less in winter.

Cryptanthus acaulis. Small 3" - 4" green rosettes. **35c**

Cryptanthus acaulis ruber. Red rosettes **35c**

Cryptanthus zonatus. Larger, brightly barred rosettes. **\$1**

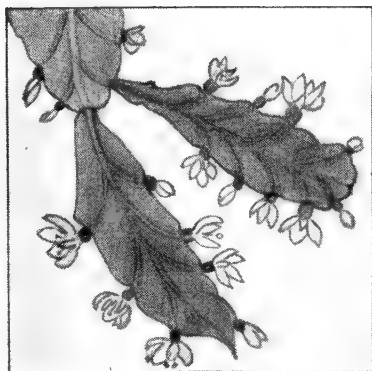


THE COLLECTION OF MRS. CHAS. MCCOOL

Mrs. McCool of Browntown, Wisconsin writes that the Orchid Cactus had 76 blossoms and the Echinopsis 32 blossoms in 1950. She has had very good results with our plants.

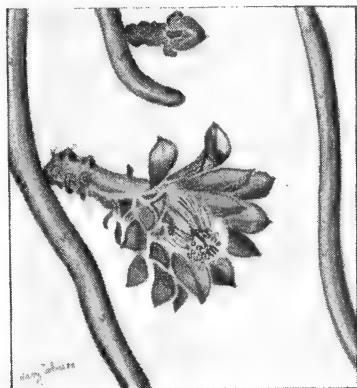
AND SHADE PLANTS

Such plants as the various Bromeliads, Peperomias, Tradescantias, Hoyas, Pelargoniums, Ceropegias, Bowiea, Sanseverias, etc. are often grown along with succulents for they thrive under similar conditions as the Echeverias. They add interest and often do exceedingly well particularly if one is inclined to be a little lavish with water. If one is familiar only with the commonly seen species of some of these plants he is surprised to learn that many are really succulents and grow along with cacti and the more reduced succulent plants. Some of the Pelargoniums (Geraniums) bear prickles and have thick, succulent stems and beautiful or curious blossoms. Peperomias ape the Lithops in bearing windowed leaves. Ceropegias are sometimes succulent bushes. Tradescantias may be very drought resistant — one I found in Guatemala looked like an Echeveria. A most interesting group are the Cissus (Grape) from South Africa which are very large-leaved, succulent, small trees with bulbous trunks but still bearing their red bunches of grapes.



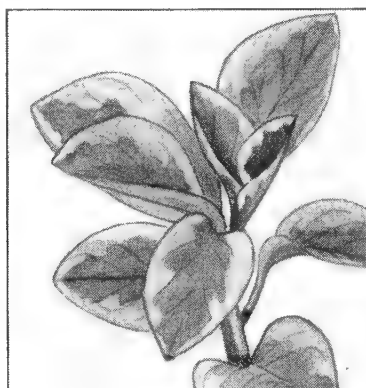
RHIPHALIS RHOMBEA

A coppery-green plant from Brazil. It grows quickly and with its colored stems and creamy flowers is quite distinctive and attractive. Upright but as the branches lengthen becomes pendant. A nice basket or ledge plant. Shield from midday sun. 35c



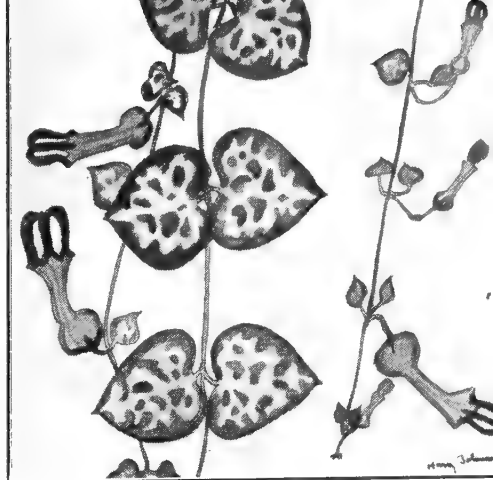
WEBEROCEREUS BILLEYI

This spineless, slender, climbing or pendulous cactus may be trained around a window frame or allowed to hang down. The flowers are clear pink and, with us, it blooms in early summer. The tiny stems produce a great many aerial roots. 35c



PEPEROMIA VARIEGATA

Brightly variegated yellow and green. The succulent leaves are 2" long the stem red. Grows quickly and easily in a well lighted but not too sunny position. Give it a porous soil and in summer plenty of water. Nice. 30c



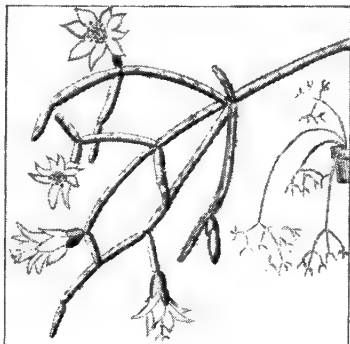
HEART VINE ROSARY VINE Ceropegia Woodii

A trailing vine with heart-shaped leaves variegated silvery-white and green. Flowers curious, purple. Grows from a small tuber. This African succulent grows very easily liking a well lighted position. Use a rich but porous soil and a moderate amount of water. Potted. 35c



CHIAPASIA NELSONII

The bright violet-pink blossoms are about 2 1/2" long, borne abundantly in the spring. This pretty epiphytic Mexican cactus has long terete canes from which spring the thin, flattened, side branches. It prefers a cool, partly shady situation rather than a hot dry one. Each. 75c



RICE CACTUS

Rhipsalis cereuscula

Slender, arching stems bearing many white blossoms in the spring followed by white mistletoe-like berries. The branches are borne in whorls of 2 or more and are slightly woolly. Give plenty of water. Each. 35c

SCHLUMBERGERA GAERTNERI

A handsome Brazilian epiphytic cactus also called Epiphyllopsis. The blossoms are a rich scarlet borne on the distal end of the short oblong, truncate branches. It differs from Zygocactus in its regular, short-tubed, rotate flowers and angled fruit. Not an easy plant to grow. Prefers a compost of sand, leafmold with a small part loam and plenty of light. Does well grafted on Selenicereus. Single. \$1

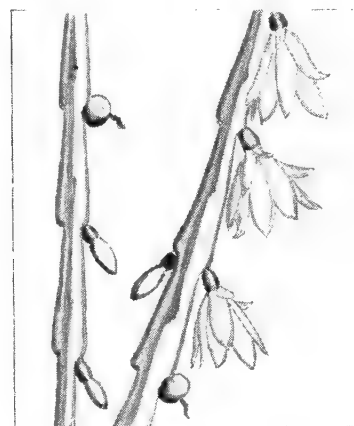
Thanksgiving Cactus. A hybrid probably between Zygocactus truncatus and S. Russelliana. Each. 75c

EPIPHYLLANTHUS OBOVATUS

A curious small plant looking like a small Opuntia yet with small purple flowers resembling Epiphyllum. Rare. Ready 1952. Each. \$1

RHIPHALIDOPSIS ROSEA

A dwarf Brazilian cactus with rose colored blossoms. A fragile plant liking a cool shady place. Ready 1952. \$1



POPCORN CACTUS

Rhipsalis warmingiana is a Brazilian plant with slender, flat or 3-winged stems and rather large, drooping, white flowers borne quite freely. The fruits are dark purple berries. Partial shade, porous soil with leafmold and plenty of water in summer. 35c

HATIORA

Allied to Rhipsalis but quite distinct. Stems bottle-shaped or cylindric, short with a large, woolly, terminal areole from which the new stems and flowers arise. Flowers yellow or orange otherwise as in Rhipsalis. These pretty plants do well in a quite porous soil with leafmold. They like a light but not very sunny place and a cool rather than hot atmosphere.

Hatiora bambusoides. 40c
Hatiora salicornioides. 50c

LEPISMIUM

Epiphytic cacti with long, slender, flat or angled, crenate branches the areoles with tufts of white hair. Flowers white with a short tube; filaments slender united to the tube; fruit globose, smooth, turgid, purple. An interesting genus related to Hatiora and Rhipsalis but differing in having a short flower tube and filaments not borne on disk.

Lepismium cruciforme. 50c

ERYTHRORHIPHALIS PILOCARPA

A tiny Brazilian cactus (resembling Rhipsalis) with pink flowers and bristly fruit. Scarce. Ready 1952. \$1

RHIPHALIS

Epiphytic, terete or flat stemmed spineless cacti found from Mexico to Argentina. Flowers without tube, perianth segments distinct; filaments borne on disk.

Rhipsalis bolivianus.	75c
Rhipsalis capilliformis. Slender, drooping	35c
Rhipsalis cassutha. Peruvian form.	50c
Rhipsalis clavatus. Copper colored.	35c
Rhipsalis crispatus.	35c
Rhipsalis dissimilis. With bristles.	35c
Rhipsalis heteroclada.	50c
Rhipsalis Lindbergiana. Pinkish flowers.	40c
Rhipsalis Neves-Armondii.	35c
Rhipsalis pachyptera. Green form.	50c
Rhipsalis pachyptera. Purple stemmed.	50c
Rhipsalis pendula.	50c
Rhipsalis pentaptera. Many ribbed.	50c
Rhipsalis pulvinigera.	40c
Rhipsalis Schaferi.	50c
Rhipsalis teres. Slender terete stems.	35c
Rhipsalis trigona. 3-angled, fruit red.	40c
Rhipsalis virgata. Terete, pendulous.	35c



A NEBRASKA COLLECTION

Mrs. Fred Reimers of Omaha, Nebraska has 105 different kinds in her well kept collection. Many of her plants have come from our gardens and she has always been well pleased. Each year she adds a few more kinds.



MISTLETOE CACTUS

A compactly branched plant. Rhipsalis mesembryanthemoides has small white flowers and mistletoe-like berries. The short joints have slightly woolly areoles. Likes shade, generous waterings and porous soil. Native to Rio de Janeiro, Brazil. 40c



POLDI SVETNIC

Listing of Orchid Cacti

The hybrids have been listed according to the general ground colors as this is perhaps the simplest way to find a wanted plant or select new additions. They could be listed according to parentage but this is always confusing not to say controversial. In some cases where the dominant parent contributes a decided racial character they are listed accordingly.

Red and Violet Red

Gloriole. Red-violet with petals edged with violet. Perianth cup-shaped, large, the inner petals acute. The flower has a waxy texture and pleasing fragrance. Each.....**75c**

Amber Queen. A large flower up to 10", brilliant orange-red. Inner petals undulate margined shading to yellow at the base giving the flower an amber glow. A good grower. Each **75c**

Hermossus. A large, broad-petalled flower of fine red. Throat brilliant, iridescent violet. Free flowering and a strong vigorous grower with wide branches. Each.....**75c**

Champion. A large, wide opening blossom of deep red. Petals broad, edged with violet with light red center stripe. Has both flat and triangular stems. Each.....**75c**

Orion. Large, wide opening flower of rich scarlet with blue-violet eye.....**75c**

Dante. A large 9" blossom orange-red the inner petals suffused with delicate violet tones. A vigorous grower with some 3-angled stems. **75c**

Germanica. Predominately purple with maroon outer petals deepening toward the center. Each**80c**

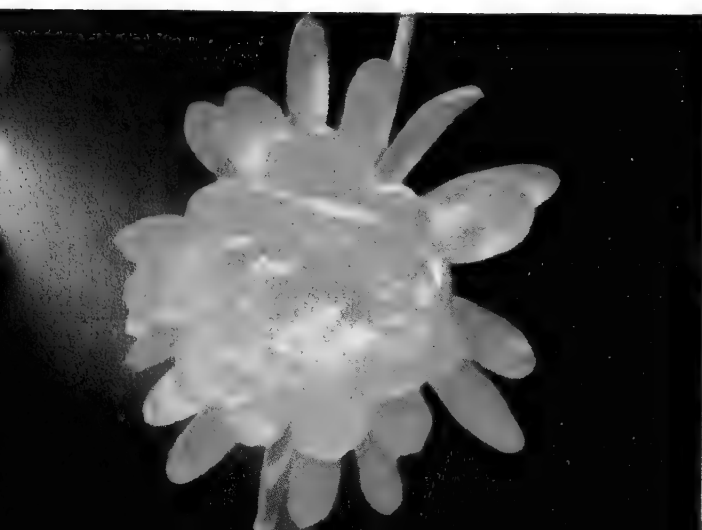
Belgian Pfauf. Outer petals deep orange, inner petals dark violet shading to lavender the petal edges white. Fragrant, wide opening, flowers.**\$1.00**

Scarlet Giant. An old favorite. Blossoms very large, orange-scarlet the tapering petals divided by an orange stripe. Throat violet-red.....**75c**

Erlauer Kind. Wide, all violet flower with flaring outer petals. Plant growth vigorous with thorny, triangular stems.....**90c**

Viviana. A favorite old variety. Red-purple blossoms widely opening. Good basket variety. **75c**

CALLENDER'S PFAU



EPIPHYLLUM OR ORCHID CACTI

ORCHID Cacti is a better name than Epiphyllum for the present day hybrids for they are bi-generic or tri-generic crosses. Hybridists have taken the white flowered wild species of Epiphyllum and crossed them with Heliocereus, Nopalxochia, Selenicereus, Hyllocereus, Chiapas and apparently Echinopsis. Since the hybrids have inherited characteristics from both parents there is small cause for wonder at the great variation to be found in the Orchid Cacti. They run the gamut in color from white through all the shades of pink and violet, reds and orange-reds and various combinations of colors where the perianth segments are bordered or striped with contrasting colors. There are no true yellows or blues as yet. Hybrids with Selenicereus blood often have a golden outer perianth but the inner will be white or very pale. True blue is a very rare or non-existent color in the Cactaceae which however has many purples and lilac-pinks.

New hybrids are being raised continually and perhaps over 3 000 have been named. Of a certainty many of these can differ but slightly. Most have ceased to exist often because the plants are weak growers or very subject to diseases or are shy bloomers or offer no improvements over better known varieties. The hybridizer now has a much clearer picture of what kind of improvements he wants and with the known recorded data, just how to go about securing it. New races are being developed or their further possibilities explored such as the Chiapas and Nopalxochia hybrids which have a character all their own. There are several genera that could yet be used such as Weberocereus, Werckleocereus, Mediocactus and Deamia. One can look forward eagerly to pleasant surprises yet to come.

Peacockii. Bright carmine-red with luminescent violet-blue throat. A huge blossom with overlapping petals. Stems triangular. Lovely. **\$1.00**

Garnet. Radiating garnet-red outer petals. Inner petals red-violet edged with lavender at base. Fragrant.....**75c**

Northern Lights. Silver-lavender throat deepening towards the ends of the petals, tipped with rose-red. Flaring, dark-red outer petals.**75c**

Ernest Seyderhelm. Large, coppery-orange flowers shading to red and violet. Petals sharply pointed with lacquered sheen. Excellent basket plant.....**75c**

Hans Rehm. Highly lacquered 8" blossoms. Claret-red petals bordered in deep violet. Plant stems deeply notched. Good basket variety.**75c**

Camillo Schnieder. Large red flower, petals bordered with lavender with lavender throat. Triangular stems.....**75c**

Livingstone. Inner petals intense magenta with buff center stripe. Outer petals deep red-violet.**75c**

Etoile de Contich. Large well shaped flowers, outer petals salmon-red, inner petals flushed with violet.....**75c**

Grandiflora. A large wide open flower with broad petals of red and violet.....**75c**

Ackermannii. Not the true species but the one generally in the trade. A free-flowering red variety often with 3-angled stems.....**60c**

Liberta Knebel. The tapered, frilled petals are brick-red edged with violet standing well apart.....**75c**

Fiesta. Large rich red blossoms the outer petals scarlet with orange center stripe, inner petals orange bordered with violet.....**75c**

Tulip. Vivid red flower with very broad rounded petals. Lovely.....**75c**

Loebneri. Inner petals rose-lavender also the pistil and stamens. Outer petals red violet **75c**

General Garibaldi. Large vermilion-red flowers with faint carmine edging the inner petals. Throat violet.....**75c**

Oberst Kunrich. Inner petals deep violet outer series shading from maroon to copper. Slender, spreading petals. Flower Chrysanthemum-like in appearance. **75c**

EPIPHYLLUM PLANTS

All Epiphyllums offered are well rooted cuttings often with secondary shoots. Large specimens are not available.



PROFESSOR EBERT

A lovely variety with flowers of bright violet-carmine. A good, sturdy growing plant with triangular, upright, bright green stems. A good free blooming variety and quite sure to flower. An attractive plant. **90c**

PALETTE ASSORTMENT

Collection Z-4

3 Beautiful Orchid Cacti for the Window Garden

- 1 Red.** Labelled.
- 1 White.** Labelled.
- 1 Bicolor.** Labelled.

Named varieties of first quality and fine types..... **\$2**

JUBILEE ASSORTMENT

Collection Z-5

8 named Orchid Cacti in a fine range of colors and types for 4" pots.

A rainbow in your window..... **\$5**

CULTURE

THE Orchid Cacti are not desert plants but forest or jungle plants and need quite different care than the true desert types. The parents are native to Mexico and Central America and extend to Brazil and Peru in South America. Some are found in the wet jungles but most of the larger flowered types from which our hybrids have descended are native to the drier mountain forests where oaks and pines are at home. I have collected many wild species but the oak and pine forest plants were always the handsomest.

Thus it will be seen that these plants like a cool or warm rather than a hot climate. They don't like freezing of course and at temperatures below 32° one is taking unnecessary chances. In California they will take temperatures of 27° without great harm and with the protection of wrapping paper, burlap, etc., they survived temperatures of 19° outside under lath.

Since they are often epiphytes, that is tree-dwellers living perched up on the branches or clinging to the trunks, it will be seen that they enjoy fresh air. Give them good ventilation, they will appreciate it more than heat. They do not enjoy a close, stagnant atmosphere though they will do very well even under such conditions.

Epiphytes are not used to sticky or clayey soils as in nature the roots creep about in the moss, roots and accumulated humus which is understandably not too plentiful high up in a tree nor is much to be found on the rocks or cliffs which the plants also frequent. Thus in your garden they will thrive best in an open, porous soil with leafmold (humus) where the roots will get plenty of air. They will suffocate in wet, clayey soils.

There is generally some shade where they grow, not dense shade but broken sunlight. So in your window garden put them where they get some sunlight but not the hot mid-day sun. If they can be put outdoors in the summer they will appreciate it. On a protected veranda or under the shade of a tree will suit them fine.

To sum up their requirements which are simple and easily within the reach of every window gardener: Pot them in loose, open soil using not too big a pot seeing that the pot is drained so excess water can escape; put them in a position where some sun is had but partially protected from the hottest sun and where there is some fresh air; water carefully, don't keep them dry but do not saturate them, give only enough so they will dry out in about a week or so; in winter time keep them from growing as much as possible by keeping a little drier and cooler.

Potting soil: 1 part leafmold, 1 part coarse sand, 1 part sandy loam. Old rotted cow manure may be added up to 1 part. Optional.



A PENNSYLVANIA COLLECTION

Mrs. Ivan Gehman of Denver, Pa., flowered many of her plants last summer. She has 250 different kinds. *Thelocactus bicolor* had 3 flowers. *Hamatocactus* 6 flowers, the *Gymnocalycium* all flowered as did the *Parodias*. More than 50 kinds flowered.



ORCHID CACTI

Various flower forms and colors. Note the difference in size, petal shape and arrangement and the difference in the inner and outer perianth segments (petals). The varieties shown are: Top 5, left to right; Valencia, Rosetta, Londonii, Fairyland, Romance; next 3, slanting row; Gloria, Peacockii, Prof. Ebert; next 3, Admiral Togo, Marseillaise, Bohemienne; bottom; Jenkinsii. Photo taken in Cactus Pete's garden, color plate courtesy Scott E. Haselton from the *Epiphyllum Handbook*.

Red-Violet, Maroon

Hermosissimus. (Dr. Houghton). An exquisite flower one of the most striking I know. Inner petals brilliantly bordered with violet with orange center stripe, throat an effulgent electric blue-violet. Outer petals bright red shading into orange-red. Each.....\$1.25

Mrs. Grant. Flowers predominately purple with red outer petals. Lovely.....75c

Callender's Pfau. Not always in stock. Light lavender-cerise with full rounded petals, cup like. Outer petals tan.....\$1.00

Valencia. A heavy blooming plant flowering late in the season. Inner petals orange-yellow darkening to red with violet tones in the throat. Outer petals deep orange red.....75c

Conway's Giant. An old favorite. The large flowers with broad, crimson outer petals. Inner petals overlaid with crimson and violet. A strong grower and free bloomer.....75c

Anton Gunther. Excellent flower in tones of blue violet. Inner petals with rounded tips forming a wide cup. Petals with red-violet to lilac center stripe and white border. Back petals red violet.....\$1

August von Szombathy. Outer petals deep

violet, inner petals with delicate violet stripe shading to pink. Excellent for corsages and for basket culture.....80c

Frederich Werner Beul. Fragrant 10" blossoms, petals with reddish orange center stripe shading into violet and pale lavender with white edges. Petals broad, flat, crinkled.....75c

Paula Knebel. Large flower with spreading petals. Outer petals crimson, inner petals violet shading to lavender at edge with orange center stripe.....75c

Red Queen. Bright orange-red blossoms with faint lavender overlay a free bloomer and vigorous grower.....75c

Sacuntala. Handsomely striped flowers, unusual color. The lanceolate petals are terracotta edged with carmine with a violet center stripe.....75c

White

Oriole. A lovely variety with contrasting yellow and white petals. Outer petals are rich yellow shading to coppery gold. Inner petals pure white the margins slightly shirred. Flowers large, freely borne plant strong and vigorous. Good basket type.....75c



GLORIA 2/5 natural size..... **75c**

White. (Continued)

Easter Morn. Large, fragrant white flowers. Inner perianth cup-shaped, pure white. Outer perianth flaring yellow and gold. Plant strong, branches deeply serrated..... **75c**

Shasta. Pure white delicately transparent flowers. Petals spirally twisted. Excellent corsage flower..... **75c**

Londonii. A European variety showing a considerable amount of yellow. Inner petals creamy white, outer series yellow deepening to gold. **75c**

Poldi Svetnic. Star-like white 7" flowers with numerous narrow petals opening flat. Good basket variety..... **\$1**

Oswald Knebel. Large white blossoms the outer perianth yellow shading to gold and brown. **85c**

Eden. Large fragrant flowers the outer perianth rich yellow shading to pure white within with pale green throat. Excellent bloomer..... **85c**

Mt. Hood. Large, pure white inner perianth with pale green throat. Outer series yellow. Fragrant, opening widely..... **85c**

Moonrise. Lovely, large white blossoms, outer perianth rich saffron yellow, inner series pure white. Flower fragrant, quite open. Plant vigorous, healthy..... **75c**

A SPLENDID COLLECTION

Mr. Theodore Grahl of Woodridge, N. J., puts many of his plants in outdoor beds during the summertime with fine results. He has been collecting cacti for more than 50 years and has one of the finest groups of rare cacti in the country. A real plantsman.



Stadrat Richter. Fragrant white flower produced from base of the short stems. Outer perianth golden yellow, inner series ruffled, pure white. **75c**

Pink and Rose

Agatha. Soft pastel pink petals with satiny sheen the base of the petals cherry-red. Large, wide opening flowers. Free bloomer and strong grower. **75c**

Bohemienne. Beautiful three colored blossom. Outer perianth deep salmon-pink, spreading. Inner perianth wide petalled, funnellform pale pink and lilac. **75c**

Rosetta. Clear rose pink shaped like a rosebud with incurved inner petals, outer petals recurved. A good basket variety of medium growth. **85c**

Lafona. A handsome, large, loosely petalled flower of lovely orchid pink. Inner petals suffused with lilac outer series deep rosy pink. Strong grower..... **75c**

Symphony. Large cup and saucer-like flower with delicate violet throat and contrasting rosy-buff petals..... **85c**

Scheherazade. Fine free bloomer with bright pink flowers deepening on second day to lilac. **75c**



RATTAIL CACTUS

Aporocactus flagelliformis. Not available.

Bel-Air. Unusual pink with rosy-violet inner and outer perianth. Inner perianth cup-shaped outer series reflexed..... **85c**

Argus. Handsome cup-shaped flower of salmon-pink with cherry-red center. Flowers late over a long period. Strong grower. **75c**

Cynthia. Delicate clear pink. Inner perianth full, cup shaped, with white throat. Outer series reflexed. Good grower, fine for baskets. **85c**

Adonis. Large pink blossom with lilac sheen and rosy lilac center. Good grower..... **75c**

Saturnalia. Large clear pink blossom with cerise center..... **75c**

Richard Diener. Huge rose pink blossom. Inner perianth delicate apricot pink darkening at petal margins. Base of petals cerise. Petals flat with undulate margins pistil cerise, anthers lavender. **\$1.25**

Welcome. Fragrant flowers of pale rose-pink suffused with pale lilac with darker lavender eye. Petals ruffled on margins. **85c**

Lohengrin. Deep orchid blossoms with rose eye. Flowers very large with wide petals..... **75c**

Empress. Light pink with tubular inner perianth. Outer segments recurved, deep rose pink..... **85c**

Jorge Siepke. Outer perianth mauve shading to orchid pink, inner series with the color running in stripes toward the center, petal tips lilac-pink..... **85c**

Wanda. Dark rosy-mauve blossom. Inner perianth wide and bowl-shaped. **75c**

Royal Rose. A large blossom 9" across of rosy-buff the center flushed with lilac lightening toward the petal margins. Good basket type..... **85c**

Joseph De Laet. Outer perianth with spreading, scarlet-red segments. Inner perianth violet to pale lilac with darker center stripe. Very choice..... **\$1.25**

Padre. Fine warm pink blossoms the inner petals rolled, outer series flaring. A vigorous and reliable plant..... **75c**

Pink Nymph. Lovely salmon-pink, saucer-shaped blossom with ruffled petals. Free flowering and vigorous grower. Excellent basket variety..... **75c**

Ramona. Outer perianth rose-pink, inner series salmon-pink shading to pale pink..... **85c**

Madam Sallier. Light flesh-pink blossoms the inner petals with darker pink center stripe..... **75c**



EMPRESS

This lovely plant is commonly known as Empress or Deutsche Kaiserin. It is probably the true wild *Nopalxochia phyllanthoides* though the best types are quite likely to be hybrids. Until the wild plants are identified one can only add to the confusion..... **85c**

NOPALXOCHIA

A small Mexican genus near *Epiphyllum* but differing in having a quite short tube. In *Epiphyllum* the tube is slender and longer than the limb. Some botanists have included *E. Ackermannii*, recently re-discovered, to the genus. Britton and Rose's description of their genus would allow the inclusion of this plant for they definitely state "inner (perianth) spreading or connivent." The cultivated *E. Ackermannii* are of hybrid origin probably with *Heliocereus* but not *H. speciosus*. Strangely these two beautiful plants have evaded the collector for 125 years though cultivated plants are found in the localities where they probably are wild. It is possible the newly refound *N. Ackermannii* may produce a new race of small flowered Orchid Cacti.

Nopalxochia phyllanthoides. Empress..... **85c**

Orange, Amber

Bliss. Pastel orange. Inner petals rounded, outer series long, slender and well spiraled. Strong grower.....**75c**

Sun Goddess. Huge 10" flowers of brilliant burnt orange with golden sheen. Violet eye in throat. Petals large and graceful.....**85c**

Dr. von Roeder. Large waxy flowers of orange-buff. Inner petals rounded, outer series erect, deep bronze in color.....**75c**

Stern von Erlau. Bronzy orange with red on outer petals all petals have an extremely high luster. Strong grower.....**75c**

Flamingo. Large flowers, brilliant orange-amber with pink overlay shading to violet in center.....**75c**

Sunburst. Large flower with burnt orange inner petals, and vivid violet throat. Compact grower fine for basket culture.....**\$1**

Sachsenland. Large, coppery-orange flowers with violet throat resembling Sun Goddess **85c**

Brown Bear. Lovely cup-shaped blossoms of bronzy orange. Strong, fast growing.....**75c**

Thoriene. Flower of unusual wide funnel-form shape the outer perianth segments slender, erect. Petals red shading to violet along the margins.....**85c**

Mon Cherie. Beautiful flower like a Parrot Tulip the petals feathered with red pencilling on a yellow ground the margins deep red-orange. Magnificent.....**\$1.00**

Mons. Jolibois. Medium orange-red blossoms. Petals red shading to orange at center margined with violet.....**75c**



CHRISTMAS CACTUS

The beautiful Fuchsia-like blossoms of *Zygocactus truncatus* are seen from November to March when other flowers are scarce. Easy to grow in a sandy soil with leafmold. Do not allow to get too dry. They are epiphytic growing in the trees along with Bromeliads and orchids. Native to the cool moist mountains of southern Brazil.

Nice Plants 3" - 5" — **75c**. 2 years old 2" - 2½".....**50c**

EMPRESS HYBRIDS

The hybrids of *Nopalxochia phyllanthoides* are charming. The small blossoms are like rose-buds the outer perianth segments curled back the inner segments rather bell-shaped. Like Empress the plants are not large. They are fine for baskets or pots.

Sea Breeze. Fine variety with brilliant pink 3" blossoms. Inner perianth bell-shaped, outer segments large and erect of deeper pink. Plant vigorous and compact.....**\$2.50**

Bambi. Exquisite fuchsia-red with darker center stripe shading into the carmine throat. Inner perianth trumpet-shaped outer segments long, recurving in a graceful spiral, fuchsia colored. Flowers and plant slightly larger than Empress.....**\$1.50**

Gay Senorita. Pale rose, veined with dark rose blending to scarlet in the throat. Petals broader than Empress. Similar to Empress in growth.....**\$1.50**

Dragonet. Coral blending to purple with crimson throat. Outer perianth segments with prominent white mid-stripe. Inner perianth bell-shaped.....**\$2.50**



HERMOSSISSIMUS 3/5 Natural Size.....**\$1.25**

CHIAPASIA HYBRIDS

These lovely small plants have somewhat the growth and habit of Chiapas. The branches are slender and the flowers are generally quite of the Chiapas type though not always.

Chiapas Marionette. A lovely lilac pink darkening toward the edges of the petals the throat lime-green. Firm texture and bold carriage add to the beauty of this flower. Bell-shaped with long tube. Shows little of the character of *Chiapas Nelsonii*. Each.....**\$4.00**

Chiapas Monmonier. Carmine with deep fuchsia border the petals often being veined with fuchsia and of silky texture. Flower trumpet-shaped; filaments rose, stigma orange. Lovely.....**\$4.00**

Chiapas Nayada. Wide bell-shaped blossoms of delicate lavender. Petals have a deep lilac border with symmetrical stripes running toward the center.....**\$4.00**

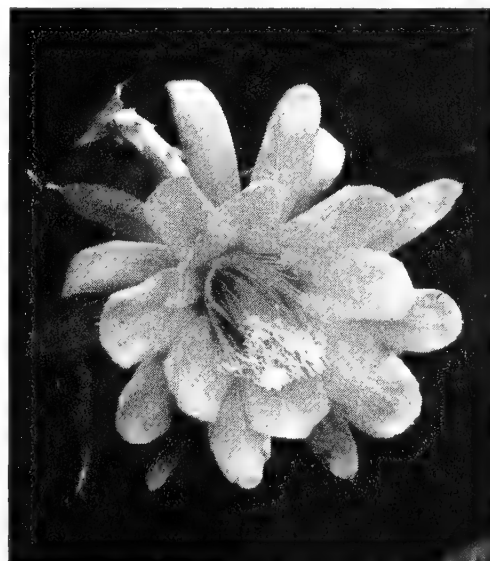
LOBEIRA

A genus of *Epiphyllum*-like plants from southern Mexico near *Eccremocactus* and *Nopalxochia*. *Epiphyllum*-like stems the crenations with large, cushioned areoles, spineless; flowers diurnal purplish-rose; ovary orbicular the minute, ovate bracts with short wool in axils; perianth tube grooved, funnel-form same length as limb, bearing scales; perianth segments numerous recurved spreading; stamens numerous; style stout. An interesting newer genus.

Lobeira MacDougallii. As available.... **\$1.50**

DRY FOREST EPIPHYTES

This picture I took in April in Baja Verapaz above Salama, Guatemala. The plants growing in this summer-deciduous oak are Bromeliads. Note the pine in the background. Near here I found *Epiphyllum guatemalense* and *Hylocereus guatemalensis*. They grow in an area a little more moist.



ACATHA

A reliable variety with warm pink blossoms with cherry-red eye.....**75c**





PLOVER EGGS

A fascinating plant with fat, round leaves marbled with maroon-red. Everyone will enjoy it. *Adromischus festivus* (Cooperi) requires a sandy, porous soil, sun and a well ventilated situation. It is well worth a little extra attention. Dot not overwater. Sun brings out the colors. Each..... **50c**



SNAKES HEAD EUPHORBIA

Euphorbia caput medusae

A handsome flowered species the bracts garnet and white forming a cap tipping each arm. It flowers from January to April. The plants are much branched making grand specimens. It is a native of South Africa and likes a sunny position and a rich but porous soil with moderate waterings. **35c**
Each 50c and.....

EUPHORBIA INERMIS

The heads have long slender arms tipped with fragrant white blossoms Culture as above. Scarce. Each..... **\$1**

CALICO HEARTS

Adromischus maculatus will be one of the gems of your collection. Easily grown in a light sandy loam. Give moderate waterings with some shade in the hottest part of the day. The leaves are beautifully mottled with maroon-red. The more sun the brighter the colorings. Each..... **35c**

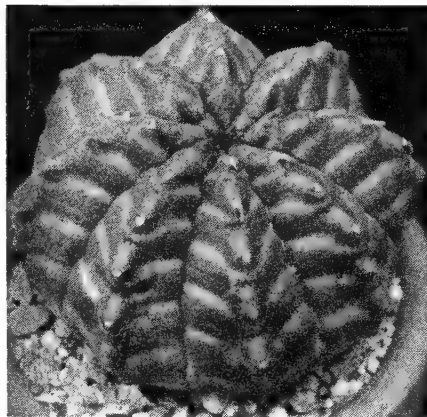


BULBINE

A small group of liliaceous plants with long, slender, terete leaves either rosettes or caulescent. Flowers in terminal racemes yellow or white. Do well in a light, loam soil with moderate waterings. A light or sunny position.

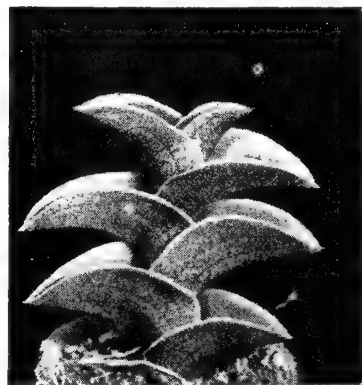
Bulbine caulescens. Small shrub. Flowers yellow. Each **40c**

Bulbine Triebneri. Small. Grey leaves. White flowers. **5c**



Striped Euphorbia

Euphorbia valida is more or less banded in a zig-zag pattern. A choice collector's item and quite scarce. The plants are either male or female and a pair is needed to produce seeds. Pairs. **\$4**. Nice specimens **\$1.00**
\$1.50 and.....



Above:

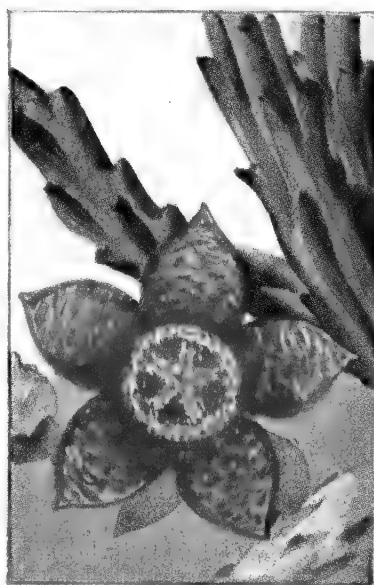
CHAIN PLANT

Tradescantia navicularis. An interesting Peruvian species. In summer the stems elongate and bear pretty, pink, 3-petalled blossoms. Easy to grow. **25c**
Each.....

Tradescantia zebrina. A pretty, large leaved, striped form of this popular plant. **25c**

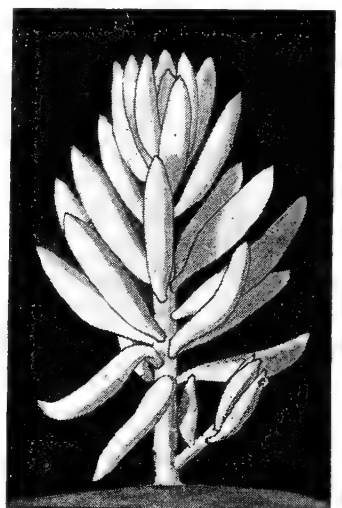
ARGETA PETRENSIS

A mesemb forming small clusters of short, thick, blue-green leaves arranged in pairs on short stems. Pink flowers. Sandy soil and a sunny place. Each **25c**



STARFISH FLOWER

Stapelia variegata is the most common of these curious plants. The blossoms are 2" across of a peculiarly leathery texture, spotted with maroon on a yellow ground. Flowers freely. Prefers a sunny place. **30c**
Each.....



COBWEB PLANT

Kleinia tomentosa is a choice collector's item. The stems and leaves are pure white entirely clothed in a snowy, downy felt. Grows freely branching at the base. Sandy loam, sunny location. Moderate waterings. **35c**

ANACAMPSEROS

These small plants are most interesting. There are two groups one with thick green leaves in rosettes the other much rarer with papery, white, overlapping stipules the slender stems branching from the base. The first are easily grown and bear rather pretty pink blossoms. The others are extremely slow in growth and should be kept in a dry, light position.

Anacampseros filamentososa. Pink flowers. **25c** and **50c**. *A. lanceolata*. Large pink, **35c**. *A. rufescens*. Pink, **25c**. *tomentosa*. **25c**. *A. telephiastrum*. **35c**

Anacampseros fissa. Very dwarf white. Rare. Imported African plants, **\$1.50**. *A. sp*. A new, handsome white species. 6 years old..... **\$1.50**



OX TONGUE

The Gasterias are fine, easily grown, long-lived plants. The 2-ranked leaves are spotted with white. They thrive in shade. Use a sandy soil preferably with leafmold. Moderate waterings. **35c**
Make nice specimens. Each.....

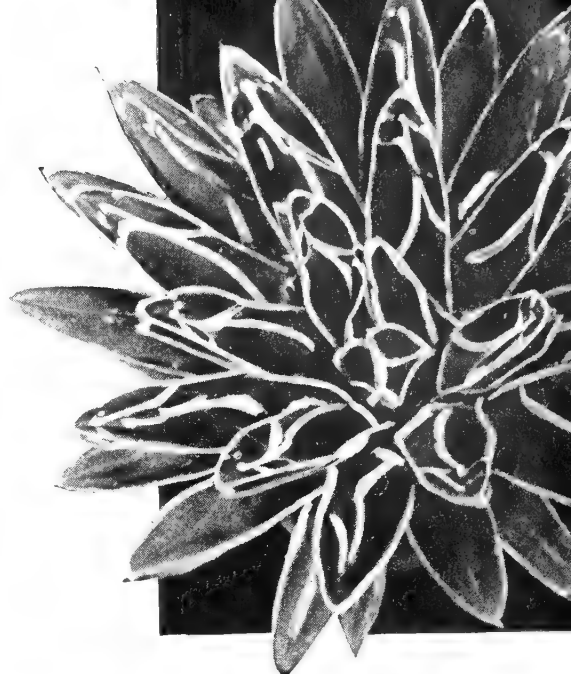
BEAUTIFUL

SUCCULENTS are becoming ever more popular as fanciers become familiar with their odd and often beautiful flowers and forms. They are termed "succulents" because of their juicy leaves or stems. Nature has provided these to store water to tide them over the long dry seasons of their homes which are deserts or dry brushlands. All desert regions do not have succulents. It apparently takes a very long time for plants to make such great changes. Thus only those regions which have become progressively drier over eons of time (in South Africa due probably to the slow elevation of a great land mass) have provided the necessary conditions. Probably also the fortuitous presence of certain plant families or their progenitors may be involved. The most prolific regions are Mexico and South Africa from whence are derived the great bulk of our plants. However they are also found in the United States, Central and South America, Arabia, all of Africa and the adjacent islands including Madagascar. Scattered species are native to Europe, India, China and even Japan. Australia has produced none unless we include *Hoya*.

Succulents belong to a diverse group of plant families chiefly Crassulaceae, Aizoaceae (Ice Plants), Euphorbiaceae, Asclepiadaceae (Milk Weeds), Liliaceae (Aloe), Amaryllidaceae (Agave), Compositae (Senecio), Portulacaceae (Anacampseros), Geraniaceae, Apocynaceae, Piperaceae. It is interesting to know that so many familiar plants in your own gardens and fields have cousins in far-away lands that have assumed such bizarre shapes. Mexico has given us such distinctive things as *Echeveria*, *Pachyphytum*, *Sedum*, *Dudleya*, *Agave*, *Nolina*, *Yucca* and numerous other similar plants. Africa has an extremely rich flora and some plant families are fabulously prolific.

SUCCULENTS

The Mesembrianthemums have reached a high degree of specialization and range from shrubby types to the curiously reduced Conophytums, Ophthalmophyllums and Lithops. A lifetime of study would not acquaint one with all the diverse forms. Euphorbia is a huge genus with over 1,000 species containing many succulent forms from large trees to the cactoid Euphorbia obesa. Strangely but few of the American Euphorbias are very succulent. Asclepiadaceae has diverged into two succulent tribes the Stapeliaceae and Ceropegias. They probably started in India the home of the less specialized types. Tracing them to South Africa they become progressively more specialized with many curious genera. Though many have a disagreeable odor the flowers are often astoundingly large (up to 18") and beautiful. Crassulaceae has the shrubby Cotyledons and Aeoniums and a great variety of Crassulas some of which are very reduced and quite pretty. Liliaceae is very diversified with many rosette types ranging from tiny Haworthias to Aloe Bainesii recorded by Marianne North 70' tall. Bowiea has a large exposed bulb. Aloes are among the most striking plants in our gardens with their thick rosettes of leaves sometimes 4' across and often with trunks several feet high. Their tall spikes of fiery red blossoms are a glorious sight. Portulacaceae in the genus Anacampseros has a remarkable development. One group has scarios white stipules clothing the tiny stems completely. Compositae in Senecio (the succulent species are often called Kleinia) has some curious species, tuberous, shrubby, succulent stemmed, window leaved and rosette types. Geraniaceae has some odd species in Pelargonium, thick stemmed shrubs, a few spined. Vitaceae in Cissus has some curious, succulent, small trees. Apocynaceae a curious, thick stemmed, pole-like tree, Pachypodium.



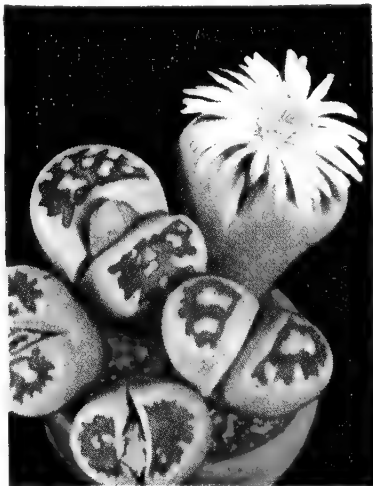
AGAVE VICTORIAE-REGINAE

A handsome Agave making a fascinating specimen plant increasing in beauty for years. Mature plants form a compact globe, dark green with clearly striped white. The leaves are rigid with irregular, painted, white markings. It reaches about 12" in diameter but grows very slowly. Give it a rich porous soil and a sunny location. Water moderately. Will stand at least 18° 4" - 6" 5 years \$1. Smaller 3" - 4"..... 50c



SPLIT ROCK

These very curious African succulents are real mimicry plants so closely resembling the stones among which they grow as to be very difficult to find except in flower. Pleiospilos Nelii is easy to grow in a sunny soil watering lightly when dry. Sandy soil. 1 1/2" - 2" 50c. 1" - 1 1/4"..... 35c



LITHOPS BELLA

The Stone Faces are amongst the most curious and strange of all plants, for they imitate the pebbles among which they grow both in shape and coloration. They are also "window" plants. Some are white, others red, green or brown. They bear their bright blossoms in autumn. Sunny location. 35c Each.

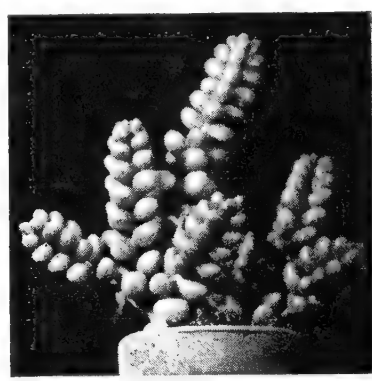
BOWIEA

A curious South African plant. The large, green, succulent bulb sits on top the soil reaching 3" - 5" in diameter. When watered a twining green shoot grows to a height of several feet. The "leaves" are really an intricately branched inflorescence bearing greenish flowers. Large \$5. Small.....\$1



PUSSY EARS

Cyanotis somaliensis has woolly leaves and purple and orange blossoms. Part sun. 25c Each.....



CORAL BEADS

Every bead is brightest red. Every bead that falls will grow! Sedum Stahlii colors brightest in full sun. Each..... 25c

OPHTHALMOPHYLLUM

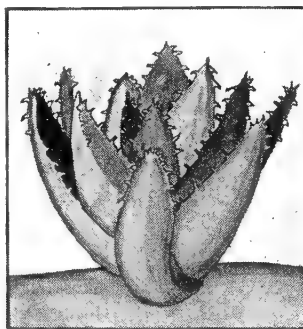
These very interesting small "window plants" are closely related to Lithops which they much resemble except for their pink or white flowers and often pubescent growths. They are softer and more succulent. They should be given a dry rest during summer.

Ophthalmophyllum	Friederickii.	Copper	50c
Ophthalmophyllum	griseum.	Tiny.....	75c
Ophthalmophyllum	Herrei.....		50c
Ophthalmophyllum	Larisae.....		50c
Ophthalmophyllum	Maughanii.....		50c
Ophthalmophyllum	multipunctatum.....		50c
Ophthalmophyllum	Schlecteri.....		50c
Ophthalmophyllum	Triebneri.....		50c
Ophthalmophyllum	verrucosum.....		35c

HOYA

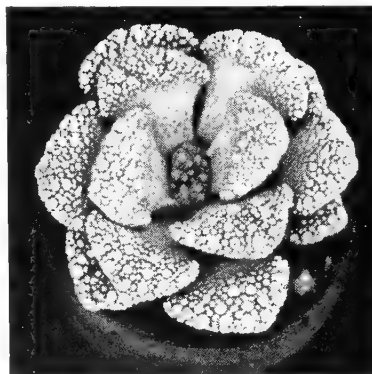
A genus of Asclepiads often with lovely "wax flowers." H. carnosa and its hybrids and varieties likes a cool, moist situation with leafmold and sand. The others are more tropical.

Hoya carnosa.	See page 43
Hoya carnosa variegata.	Page 43
Hoya Keysii.	Australia.....\$1.00
Hoya Motoskei.	White, red corona \$1.00
Hoya sp. #1.	Described yellow flowers \$1.00
Hoya sp. #2.	Perhaps near Motoskei \$1



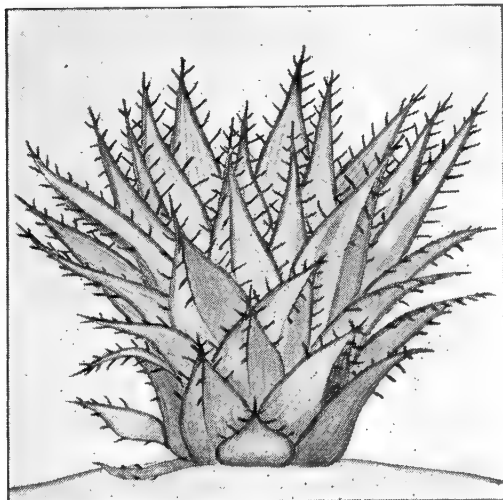
CROCODILE ALOE

The Aloes are interesting pot plants with their rosettes of toothed leaves. Aloe brevifolia is pale white, tinged green the rosettes 2" - 4". Tall spikes scarlet bells. Each..... 25c



JEWEL PLANT

A lovely mimicry plant often becoming colored in winter. The rugose leaves are blue-green and white the blossoms yellow. Titanopsis calceareum..... 25c



LACE HAWORTHIA

The lacy effect of Haworthia setata is produced by the white, bristly teeth. The leaves are lined with transparent windows. Easily grown in quite sandy soil, moderate waterings, part shade. Keep dry in July and August. 35c Each.....



AIR PLANT

Bryophyllum tubiflorum Handsome red blossoms at Christmas. Bears many tiny plants on leaves. Easily grown. 25c Sun or shade.....

SUPERB TIGER JAWS

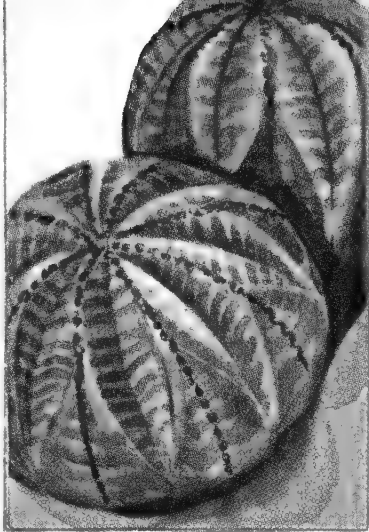
One of the prettiest Tiger Jaws with pale blue-green leaves heavily spotted with white and large yellow flowers in October. Our plants are the original variety. Faucaria tigrina superba. Each..... 35c





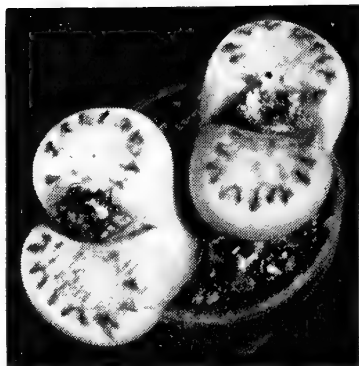
MEXICAN FIRECRACKER

The charming *Echeveria setosa* is not one of the easiest to grow. It will not ship in hot weather. The leaves are covered with plush-like white hairs. 40c



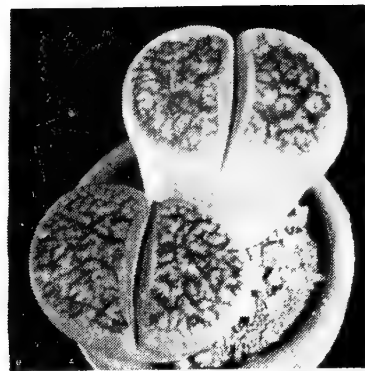
EUPHORBIA OBESA

A strange and rare cactus-like succulent from South Africa. Thrives in sandy loam with leafmold and gravel and plenty of sun. The plants are dioecious (i.e., male or female). Plants round, becoming cylindrical. Each 1" - 1 1/2" \$1



LITHOPS FULLERI

One of the loveliest species, body pearly white often flushed with rose with handsome darker brown windows in a scalloped design around the margin. Flowers large, white in October. Like all *Lithops* it likes a dry summer rest. Each. 35c



LITHOPS AUCAMPIAE

The red *Lithops* is a great favorite. The plant body attains large size, is brick red with a very intricate window pattern which is quite variable from plant to plant. Blossoms large, yellow, borne in September. Each. 35c

ADROMISCHUS

A genus distinguished from *Cotyledon* by its small tubular flowers borne in terminal spikes. The leaves are often spotted. The plants are small sometimes caulescent. Sandy soil with leafmold and plenty of fresh air. Sun or part shade. Very attractive and make fine specimens well worth extra attention.

Adromischus Alstonii. Long, fat, silvery green leaves. Each. 75c

Adromischus Cooperi. See *A. festivus*.

Adromischus clavifolius. Pretty Pebbles. Compact clusters of fat, silver-green leaves faintly spotted. A pretty plant forming cute specimens. Each. 35c

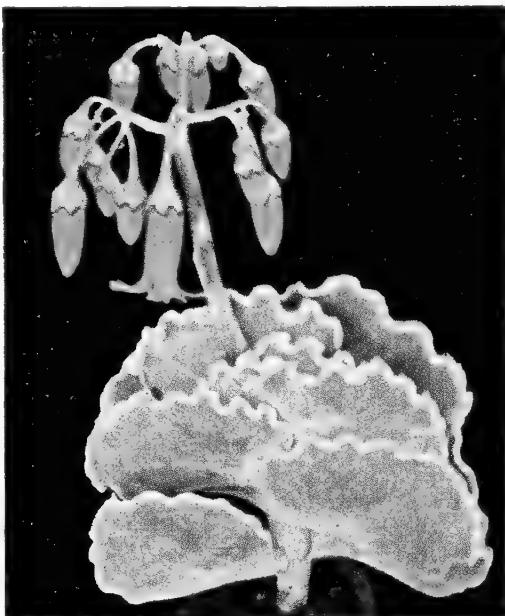
Adromischus cristatus. A very pretty species with bright green, crested leaves and rufous-red stems hairy with adventitious roots. 35c

Adromischus fusiforme. Each. 50c

Adromischus rhombifolius. Large, faintly spotted, crested leaves. 50c

Adromischus triflorus. Pretty, spotted, crested leaves. 50c

Adromischus Poellnitzianus. As available \$1



SILVER CROWN

Cotyledon undulata is a very choice plant, with beautifully crested leaves each powdered pure white. It likes the full sun and adequate but not too much water. It will then keep its beautiful color and form. Easy to grow. Each. 35c

ALOINOPSIS

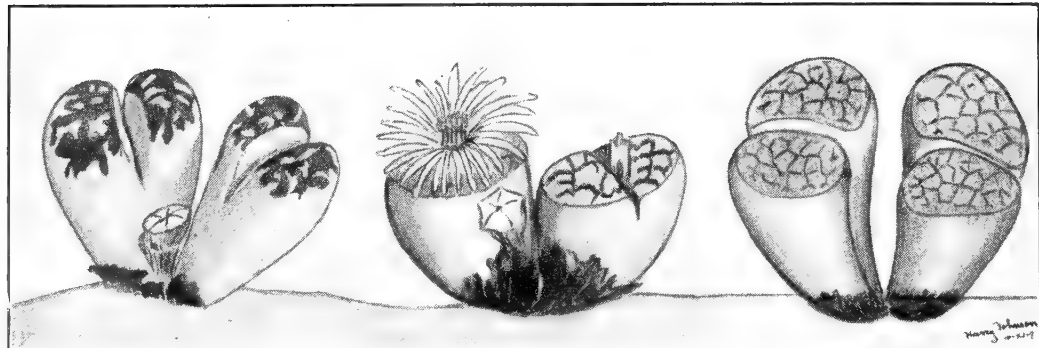
Closely allied to *Nananthus* to which most of the genus has been transferred. Roots large, carrot-like producing in age several crowns. The plants are variable and quite pretty. Sandy soil, full sun, adequate but not too much water.

Aloinopsis Schooneesii. A very choice species with small, thick, rounded-spatulate, much dotted, blue-green leaves. Pretty yellow blossoms. Rare. 75c



AN ENGLISH COLLECTION

"The plants sent in June have arrived and I am delighted with them as many I have not had before." Mrs. M. L. Adgey Edgar, Surrey.



LITHOPS FRAMESII

A very pretty variety, violet-grey with darker pattern on the rounded tops. Flowers white, produced in November. Forms clusters. Each. 35c

LITHOPS URSULAE

Charming with rusty-red incised lines on the buff colored, uneven tops. Flowers large, sparkling white appearing in November. Each. 30c

LITHOPS FULVICEPS

The fat flat topped leaves are rosy beige in color with an intricate pattern of incised brown lines. Flowers white. September. 35c



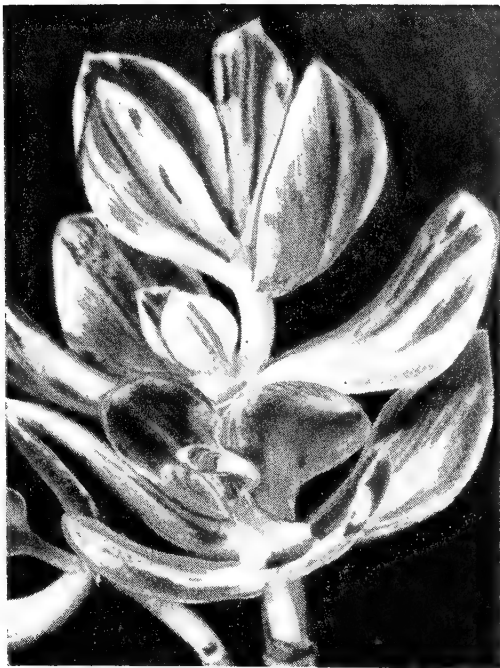
INCH WORM PLANT

The curious *Kleinia pendula* seems to be undecided as to whether it belongs to the animal or plant world! The stems loop up and down as they go forward just like an Inch Worm. Sandy soil. Fertilize during summer when growing, water moderately, shade slightly. In winter keep dry. Bears large scarlet flowers like carnations, in spring. Each. 35c



ECHEVERIA "SOLEDAD"

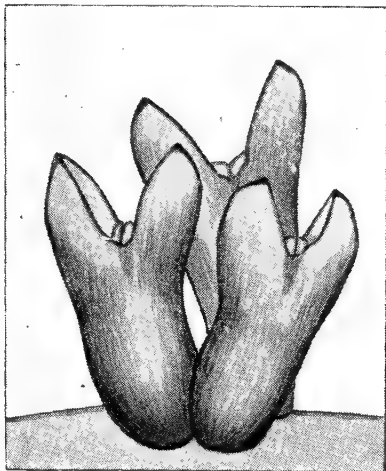
A very pretty multiple cross *Echeveria* with fine red flowers in early spring. Pale silvery green rosettes. 40c



TRICOLORED JADE PLANT

A pretty rainbow-hued succulent. This is a real beauty growing anywhere and brightening up any group it is placed with. *Crassula argentea* var. *tricolor* has leaves striped pink, yellow cream and green. Grows in sun or shade. Moderate watering. Each.....

35c



CONOPHYTUM MEYERAE

A rare species of the bilobe group of Conophytums. The growths are 1½" - 2½" long and with age become clustered. They need a very sandy soil with some leaf-mold and a sunny, airy location. During June, July and August they must be kept dry as this is their resting period. They should never be overwatered. Each.....

\$1.00



BURRO TAIL

A lovely plant *Sedum Morganianum* has pendulous tassels of palest silver. A glorious specimen when well grown. To 3 feet. Each.....

35c



SCARLET PAINT BRUSH

Rochea falcata is a most beautiful flowering plant bearing large trusses of scarlet blossoms in September. The grey-white leaves are flattened and are 2-ranked. Give generous treatment and a sunny location. Very easy to succeed with. Nice. 35c and.....

25c

AGAVE

The Century Plants are from the south-west and Mexico. They generally flower within 25 years and their tall branched spikes are familiar to travelers. The rosettes of many are very large up to several feet across though many of the prettiest are quite small. Give them a rich, well drained soil and a sunny location. Water moderately. In the winter they may be safely kept in a frost free cellar or attic. The species are innumerable but few are in general cultivation due to the space required.

Agave attenuata. A spineless, pale green species. The graceful rosettes in pot culture seldom reach more than 2' across. The trunk may become 3' tall. Ready in fall. Each **75c** and **\$1**

Agave americana var. **Victorinae-Reginae.** A dwarf form of the century plant with golden-margined leaves. Each **\$1**

Agave filifera. Narrow leaves with curling white threads on margins. Rosettes 8" - 12". Slow growing. Each..... **\$1.50**

Agave Victorinae-Reginae. See page 37

Agave sp. No. 1. Long narrow leaves, banded cream. Striking. Each \$2.50. Smaller. **\$1**

Agave huachucensis. Rosettes to 18". Leaves silvery gray, short, wide with black terminal spine. **\$1.25**



AFRICAN LIVING ROCK

Pleiospilos simulans is an extremely interesting "mimicry" plant. The thick, grey-dotted leaves closely resemble the rocks among which it grows. A few granite pebbles placed about it make an interesting exhibit. Blossoms in autumn. Thrives in very sandy soil with moderate waterings. Sunny location. Give it a dry rest during the summer. June till September. **\$1**



TIGER ALOE

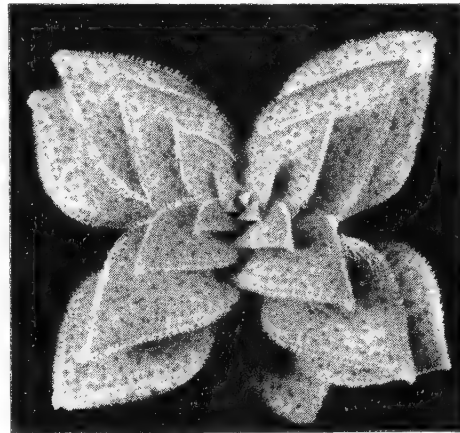
Aloe variegata is sometimes called Partridge Breast Aloe. An old favorite, handsome and easy to grow. Leaves margined and marbled white. Scarlet bells in late winter. Sandy soil. **25c**



RAINBOW BUSH

Portulacaria afra var. *tricolor* is a handsome rainbow-hued plant of yellow, cream, pink and green. Each dainty leaf closely attached to the fat, mahogany-red, jointed stems. It is a charming plant and will stand out among the plainer greens. Light loam soil, generous treatment. Don't keep too dry. Shade or part sun. 3" - 5" plants shipped potted.....

35c



ST. ANDREW'S CROSS

Crassula Triebneri

A rare and attractive small crassula from S. W. Africa. The leaves are arranged cross-like, pale yellow-green but in winter often flushed rose red. Each leaf is minutely dark-dotted the margins finely toothed. The plant is fragile and should not be shipped in the hot summer. Grows readily flowering in late spring after which it branches. Likes a sandy soil, plenty of water and either sun or shade. Each.....

35c



POLKA DOT ALOE

Aloe microstigma is charming at all times. The leaves are prettily spotted white on a pale green ground. The leaves form a rosette which, when mature, may be a foot across. It flowers in January and February bearing spikes of tubular, orange-yellow bells. Give it generous treatment and plenty of light. Nice.....

25c



CHENILLE PLANT

Echeveria pulvinata is a dainty beauty at all times. The leaves and stems are densely covered with a soft plush of fine hairs and tipped and margined with rich red. It flowers in midwinter the bells large and brightest crimson. One of the prettiest and easiest grown plants in our houses. Sandy soil with leafmold and moderate waterings. Likes a cool and partly shady place. Each.....

30c

ALOE

A very large genus of spectacular, liliaceous plants principally from South Africa. They range from rosettes 2" across to handsome tree types many feet tall. The thick succulent leaves are arranged spirally into short rosettes sometimes acaulescent often with stout trunks. A few are climbers or scandent. The flower spikes may be simple or branched into great candelabra bearing hundreds of yellow-orange or red tubular bells. Marching over veld and kopje their flaming banners are one of the great sights Africa has to offer. Give generous treatment and good soil, sunny position.

Aloe africana. A fine, quick growing tree aloe soon forming a trunk. Leaves armed with prickles. Flower spikes tall, simple, bells yellow and orange in early spring. Splendid. Stands 19' at least. Each.....

35c

Aloe ausana. Similar to *A. variegata* but with gray seeds. Each.....

50c

Aloe aristata. A dwarf species with many slender, white-dotted leaves. One of the best for pots. Choice. Each 50c and.....

35c

Aloe Bainesii. Giant tree species to 60'. Smooth trunks.....

\$2.00

Aloe brevifolia. See page 37.

Aloe comosa. Ready 1952.....

50c

Aloe Dinteri. Spotted leaves.....

\$1.00

Aloe distans. Scandent. Yellow spined.....

75c

Aloe Greenei. Stripped leaves.....

35c

Aloe Krapohlana. Stemless. 1952.....

40c

Aloe longistyla. Dwarf with the largest orange flowers.....

35c

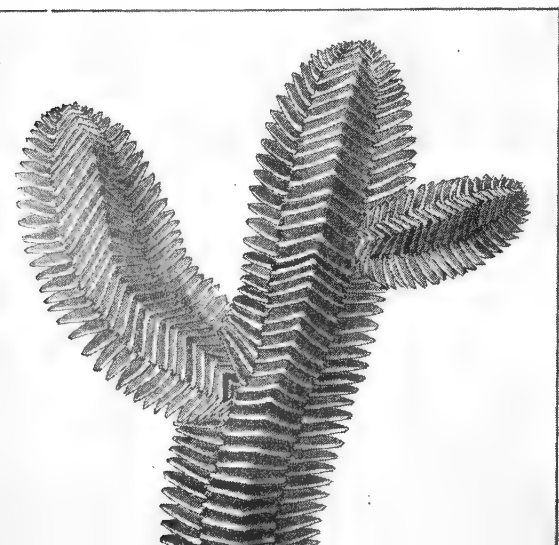
Aloe striata. A fine flowering species with handsome leaves.....

25c

PYRAMID CRASSULA

Crassula pyramidalis is a rare, collector's plant and is the most specialized of the laminate-leaved types. It bears terminal corymbs of fragrant, white "shaving brush" flowers. The flat, wedge-shaped leaves are tightly packed into tall columns. This South African species likes a sandy soil with leafmold and an airy light position watering only when dry. After establishing needs more sun. Each.....

75c



MOONSTONES

The plump white leaves are chiseled from alabaster their glaucous surface gently suffused with lavender. This *Pachyphytum* is a form of *P. oviferum* but of stronger growth. Grows easily every fallen leaf will make a plant. Does well in sun or shade and thrives on neglect. Each.....

30c

LITHOPS

Beautiful and interesting small African Mesembs in a bewildering array of species over 50 being recognized with many additional forms. They are "mimicry" plants as well as "window" plants and are often brightly colored. The plants are simply a pair of succulent, connate leaves the stem being a thin plate between the roots and leaves. A new pair of leaves is formed each fall absorbing the old pair very slowly and eventually identically filling their place the old pair forming a dry shell enclosing the new leaves. They flower at the beginning of their growing season in autumn. See color plate page 37. Sandy soil, watering moderately when dry and a well lighted or sunny location. A dry rest during late June, July and August is necessary.

L. Aucampiae. Red.	35c
L. alpina. Rust.	25c
L. bella	30c
L. Bromfieldii	75c
L. Comptonii	50c
L. Dinteri. 1952.	\$1.00
L. Edithae	75c
L. Elisabethae. 1952	75c
L. fulviceps	30c
L. fossilifera	35c
L. Fuleri	35c
L. Framesii	30c
L. Herrei	50c
L. Helmutii	50c
L. Inae	75c
L. insularis	75c
L. karasmontanum	35c
L. kuibisensis	50c
L. kunjasensis	50c
L. lactea	35c
L. Lericheana	35c

L. Lesliei	35c
L. lineata. 1952	75c
L. Lydiae	50c
L. Marthae	25c
L. mickbergensis	35c
L. Mundtii	40c
L. opalina	25c
L. Otzeniana. 1952.	\$1
L. olivacea. 1952	25c
L. Peersii	50c
L. psuedotruncatella	35c
L. salicola	75c
L. Schwantesii	25c
L. summitatum	25c
L. terricolor	50c
L. translucens	75c
L. turbiniformis	35c
L. Triebneri	50c
L. umdausensis	50c
L. Ursulae	35c
L. Wernerii. 1952	\$1.00



WART PLANT

Haworthia subfasciata is a favorite and quite deservedly popular. The warts on the leaves are much whiter than shown. It is quite easily grown liking a quite sandy soil with leafmold which the thick yellow roots can easily penetrate. Shady but well lighted position and moderate waterings. Nice 2" - 2 1/2" plants 35c. Smaller.....

25c

BRYOPHYLLUM

Often included under *Kalanchoe*. Flowers fairly large, nodding, in panicle false umbels, red, white or yellow. Leaves often bearing plantlets on their crenate margins which grow easily when planted. Hence the name Sprouting Leaf. Rich, well drained soil and cool location.

Bryophyllum Daigremontianum. Produces many plantlets along margins of its long spotted leaves. Interesting.....

25c



COOPER'S STAR FLOWER

Stapelia Cooperi is a prettily marked variety of *S. variegata*. The much spotted flowers are a bright red-dish brown. It makes a nice cluster and flowers readily in a 3" or 4" pot. Give it a rich but porous soil and a sunny position to get the best in bloom. Each.....

35c

Bryophyllum Fedtschenkoi. Blue white leaves. Pale red flowers. Produces plantlets.....

25c

Bryophyllum scandens. An interesting small vine with dark violet-gray leaves and queer mouse-colored flowers. Each.....

35c

Bryophyllum tubiflorum. Page 37.

Kitchingia peltata. Rare.....

40c

CONOPHYTUM

Related to *Lithops* but with quite different flowers. The leaves are completely joined with generally just a dimple where the flower will emerge. The plants form small rounded clusters or, in the bilobe group, upright growths. Flowers often small and yellow sometimes white or pink and charming. There are scores of species, really an incredible amount of variation and a fertile field for the fancier. Culture the same as for *Lithops*.

Conophyllum aureum. Golden flowers.....

50c

Conophyllum Braunsii. Handsome pink. Page 41.....

75c

Conophyllum Calculus. Scarce.....

75c

Conophyllum Ernianum. Spotted. Pink flowers.....

50c

Conophyllum flavum.....

50c

Conophyllum giftbergensis. Page 42.....

35c

Conophyllum minutum. Tiny species.....

50c

Conophyllum muscosipapillatum.....

75c

Conophyllum multipunctatum. Fine.....

50c

Conophyllum springbokensis. 1952.....

75c

Conophyllum Wettstienii. Purple flowers.....

75c

RIMARIA

A small genus of Mesembs near *Gibbaeum* but with more reduced growths resembling *Conophyllum*. Flowers pink, white or yellow. Succulent leaves in connate pairs. Culture as for *Lithops*.

Rimaria Heathii. Scarce.....

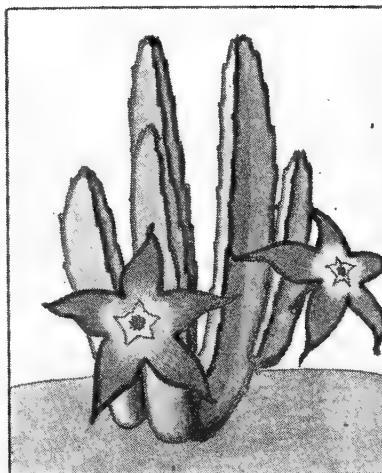
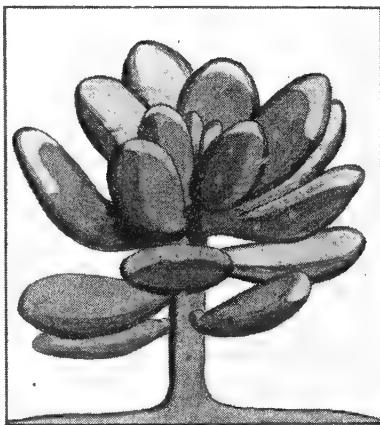
50c

Rimaria Luckhoffii. White flowers.....

35c

Rimaria Primosii. Ready 1952.....

50c



STAPELIA DIVARICATA

A free flowering small species with pretty, flesh-pink flowers an inch in diameter. The plants grow in tight clusters flowering during summer and fall. Porous, rich soil. Each.....

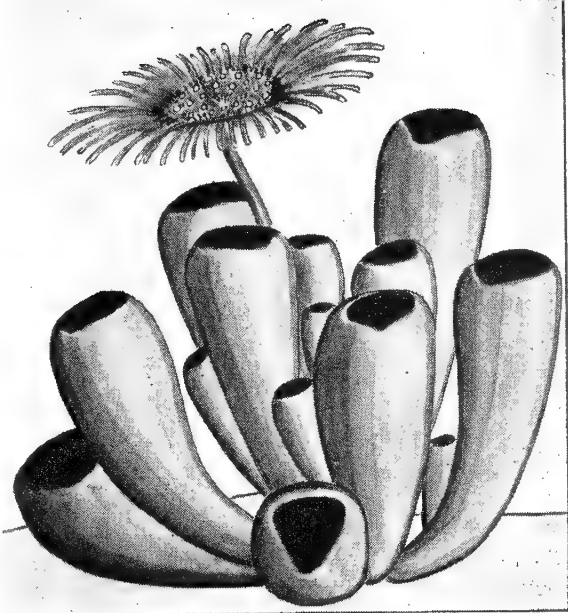
35c



DESERT ROSE

Trichodiadema densa
This pretty, pink flowered species has carrot-like roots. Each fat leaf is tipped by a circlet of bristles. Sandy soil. Each.....

35c



BABY TOES

Fenestraria rhopalophylla is a strange Mesemb from S. W. Africa where it grows in almost pure sand. In the wilds only the tips of the leaves peep above the surface, the clear window allowing the diffused light to penetrate to the chlorophyll. Flowers in autumn. Keep dry in summer and during winter. Potted. Instruction leaflet enclosed. Each.....

40c

Fenestraria aurantiaca. Orange flowered.....50c

CHEIRIDOPSIS

A large genus of Mesembs of tufted growth each with 1-3 pairs of equal leaves. Closely related to *Gibbaeum* and *Argyrodema*. Flowers large, yellow; leaves often long. Growing period September. Keep dry in summer.

Cheiridopsis Caroli-Schmidtii. Dwarf tufted.....35c

Cheiridopsis peculiaris. Very reduced. Large flowers.....35c

PLEIOSPILOS

Curious "mimicry" plants of very variable appearance some grey punctate others almost like Lithops. Very satisfactory plants

Pleiospilos Bolusii. Very rock-like.....35c

Pleiospilos brevipetala. Ready 1952.....40c



CEROPEGIA SANDERSONI

A most beautiful and curious twining, succulent vine from Natal. The flowers look like white parachutes! They are mottled, particularly on the inner surface and margined with vibratile, purplish hairs. A free grower the succulent roots needing a porous, rich soil and a bountiful water supply in summer. Train on a trellis. Keep drier in winter. Enjoys hot summers. Each.....

\$1.00

CRASSULA

A very large genus from South Africa. They vary greatly in size and form and in the amount of reduction of vegetative parts. Some are tall, leafy shrubs others are compact, tiny and imbricate leaved or rosette types. Related to *Cotyledon* but with upright flowers. Some are shade plants others like sun but generally all will be happy in a very light or partly sunny situation. To prevent a lush, unnatural growth and to preserve their curious forms water only moderately and give as much fresh air as possible. Too much water or a close atmosphere makes the growth weak and drawn.

<i>Crassula argentea</i> . Jade Plant. Shrubby.....	35c
<i>Crassula cornuta</i> . Rare white species.....	\$1.25
<i>Crassula corallina</i> . Tiny white clusters.....	35c
<i>Crassula deceptrix</i> . Rare white species.....	\$1.25
<i>Crassula deltoidea</i> . Fine white leaves pink flowers.....	25c
<i>Crassula deltoidea hybrid</i> . Handsome new hybrid.....	25c
<i>Crassula hemisphaerica</i> . See page 42.....	35c
<i>Crassula X imperialis</i> . <i>C. pyramidalis</i> X <i>C. lycopodioides</i>	25c
<i>Crassula Justi-Corderoyi</i> . Fragile.....	40c
<i>Crassula lactiflora</i> . Fine!.....	35c
<i>Crassula lycopodioides</i>	25c
<i>Crassula montis draconis</i>	40c
<i>Crassula mesembrianthemopsis</i>	35c
<i>Crassula marginalis</i>	25c
<i>Crassula perforata</i> , 2 for.....	35c
<i>Crassula pseudolycopodioides</i>	25c
<i>Crassula Purcellii</i>	35c
<i>Crassula pyramidalis</i>	75c
<i>Crassula rupestris</i> , 2 for.....	35c
<i>Crassula Schmidtii</i>	35c
<i>Crassula tecta</i>	75c
<i>Crassula teres</i>	35c
<i>Crassula tetragona</i>	25c
<i>Crassula trachysantha</i>	35c
<i>Crassula Triebneri</i>	35c



PAINTED LADY

Echeveria Derenbergii is a choice, late winter and spring flowering succulent. It grows very easily and flowers freely. The blossoms are orange-red borne on short spikes and several spikes may appear on each plant. The very pretty white-green leaves are tipped and edged with red. Give it a rich porous soil, fresh air and plenty of moisture. Sun or part shade. 35c and.....

25c

PACHYPHYTUM

Handsome Mexican plants allied to *Echeveria* and *Cotyledon*. The leaves are thick and beautifully colored and are borne in a close spiral sometimes on 6" or taller stems. The flowers are subtended by fleshy bracts. Treat as for *Echeveria*.

Pachyphytum brevifolium. Stems sticky. Each.....30c

Pachyphytum compactum. Blue and grey.....30c

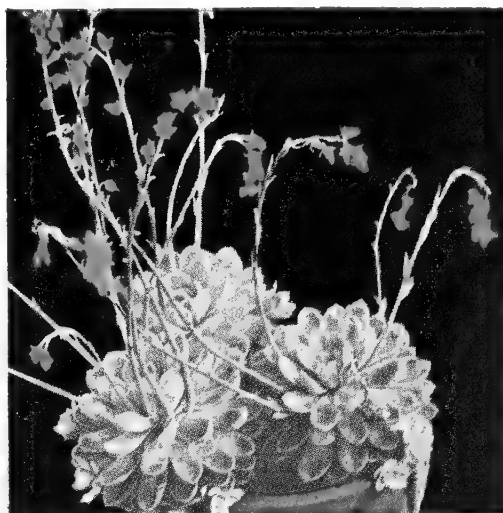
Pachyphytum near ovifrum. Moonstones.....35c

PACHYVERIA

Pachyveria glauca. Handsome.....25c

Pachyveria La Rochette. Ready 1952.....50c

Pachyveria Lesliei. Tall.....35c



MEXICAN GEM

Close rosettes of powdered, white, spoon-shaped leaves. The blossoms which appear in the spring are charming. Colors are brightest when given plenty of light. *Echeveria elegans* is very easy to grow. Each.....

30c

CEROPEGIA

A most interesting genus belonging to the same family as *Stapelia* but utterly different. Some are vines, others leafless shrubs, some have tubers. Native to Canary Islands and Africa. They like a porous but rich soil and during the summer, moderate to plentiful waterings. A very light position with some sun.

<i>Ceropegia Barkleyi</i> . Page 42.....	35c
<i>Ceropegia cafferorum</i> . Tuberous, vining.....	35c
<i>Ceropegia debilis</i> . Tuberous, vining.....	35c
<i>Ceropegia dichotoma</i> . Tall canes. Flowers yellow.....	75c
<i>Ceropegia fusca</i> . Tall purple-brown canes. Rare.....	\$1.00
<i>Ceropegia Haygarthii</i> . Ready 1952. Very large flowers purple and red. Rhodesia. New vine. Each.....	\$1.50
<i>Ceropegia radicans</i> . Page 30.....	
<i>Ceropegia stapeliiformis</i> . Occasionally available.....	\$1
<i>Ceropegia Woodii</i> . Page 31.....	



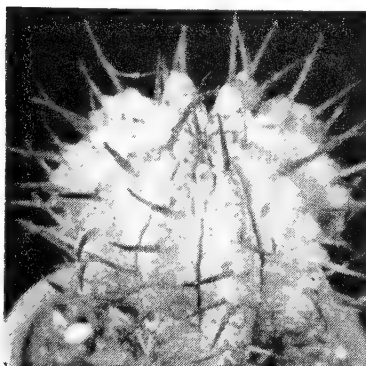
A WEST VIRGINIA COLLECTION

Mrs. J. W. Long has a well grown collection most of which have been purchased within the past three years. She has been well pleased with our plants and finds them strongly rooted and vigorous. Cactus growing is a stimulating hobby.

GIANTS WATCH CHAIN

A hybrid between *Crassula pyramidalis* and *C. lycopodioides*. Grows easily and quickly liking some shade and will appreciate rather more water than *C. pyramidalis*. With too much shade it loses its character. Each.....

25c



At left:

EUPHORBIA HORRIDA

Make handsome, very spiny, blue stemmed specimens. Not difficult. Each.....

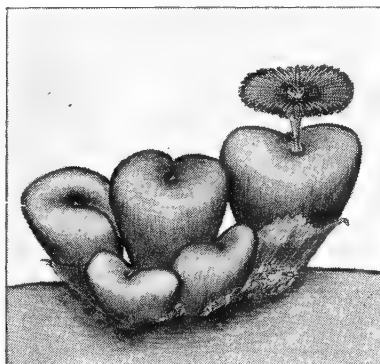
75c

At right:

CONOPHYTUM BRAUNSI

Lovely, bright magenta-pink blossoms in autumn. Forms small, flat-topped clusters. Sandy soil. Near Lithops. Each.....

75c





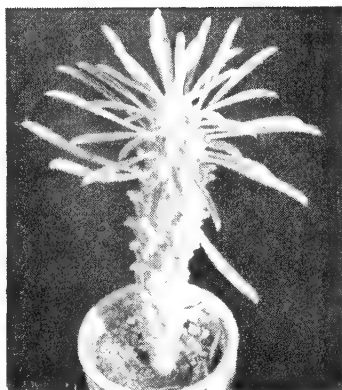
ARAB'S TURBAN

An odd and easy to grow succulent *Crassula hemisphaerica* always attracts attention. The green, light margined leaves are closely overlapping piling up into a mound. It likes a porous, well drained soil, plenty of light but not too much hot sun and moderate waterings. From Africa. Each..... **35c**

TITANOPSIS

These pretty and curious plants are classed as "mimicry" plants. They form small rosettes of leaves the tips flattened and triangular covered with raised warty excrescences generally white, green or brown. Flowers yellow or reddish-yellow. Their growing period is late summer and fall. Keep dry in summer. Do not overwater at any season. Stand temperatures of 15°.

Titanopsis calcarea. 35c. *Titanopsis Luckhoffii*. 75c. *Titanopsis Schwantesii*. 35c. *Titanopsis setifera*..... 50c



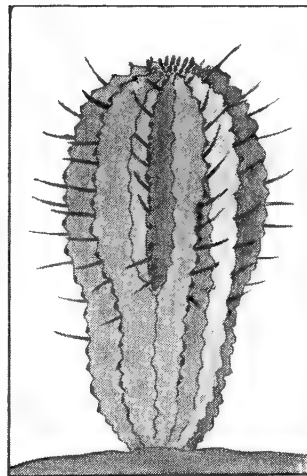
EUPHORBIA CLANDESTINA

A rare and pretty species bearing leaves among which the cyathia are hidden. It is found in Cape Province where it grows scattered among the bushes of the veld and locally is called "the Soldier." Normally grows 1' - 2' tall. A porous soil, very light or sunny position and moderate waterings. Each..... **80c**

SENECIO

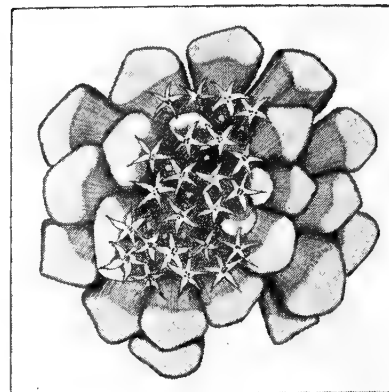
Belongs to Sunflower Family. The succulent forms show this only in their flowers. They are allied to *Kleinia* which is often placed in *Senecio*. Give them a porous but fertile soil and moderate waterings.

Senecio fulgens. Rare..... 75c
Senecio scaposus. Rare..... 75c
Senecio stapeliiformis. Candy Stick 35c



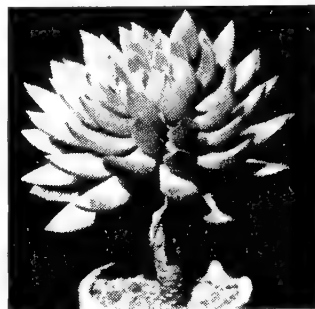
DEVIL'S CLUB

Euphorbia cereiformis branches quickly. Grows easily..... **35c**



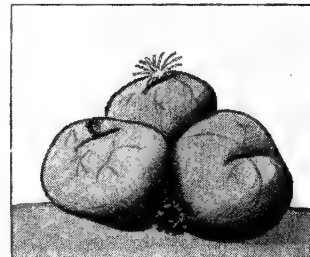
FOAM FLOWER

A rare mimicry plant *Crassula mesembrianthemopsis* is quite dwarf. The leaves are triangular, truncate, blue green, sand paper-like; the plant lies close to the soil. Flowers in a compact head, white, fragrant borne in the fall. Flowering 50c and..... **35c**



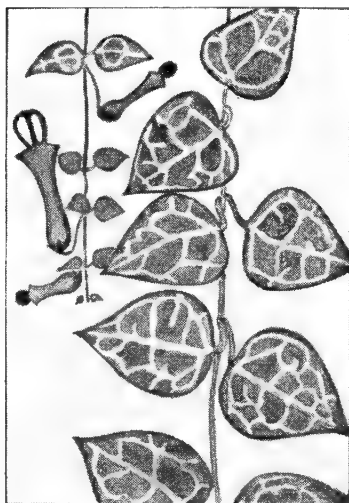
ECHVEERIA SPRUCEANA

A caulescent species from South America. Each..... **50c**



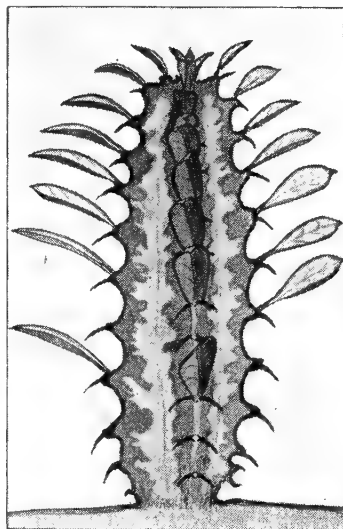
CONOPHYTUM GIFTBERGENSIS

Pale green grape-like bodies forming large clusters. Grows well in sand and leafmold. Flowers yellow, in fall. Each..... **35c**



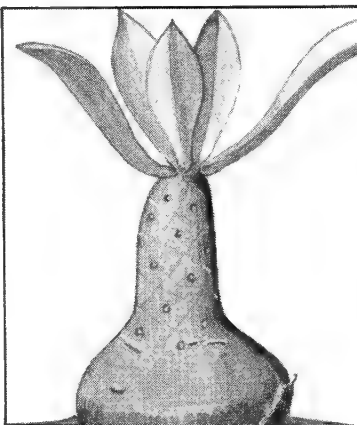
CEROPEGIA BARKLEYI

A trailing vine with tuberous roots. Easily grown. Likes moisture, partial shade, rich porous soil. Leaves mottled, silvery white. Potted..... **35c**



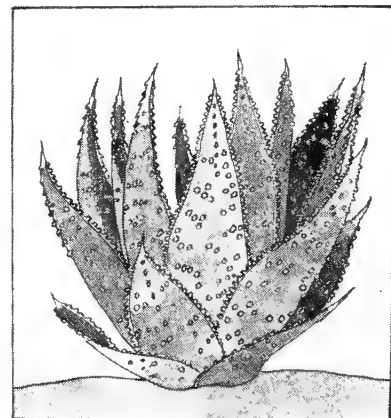
MILK TREE

Every collection should have *Euphorbia Hermentiana*. It grows tall branching freely and soon makes a fine specimen. Plants mottled white. Each..... **35c**



COTYLEDON PANICULATA

A rare plant the stem with bulbous-like base. The large green leaves are dropped during its summer resting time. Flowers dark red. Rich, porous soil. Keep dry in summer. Each..... **75c**

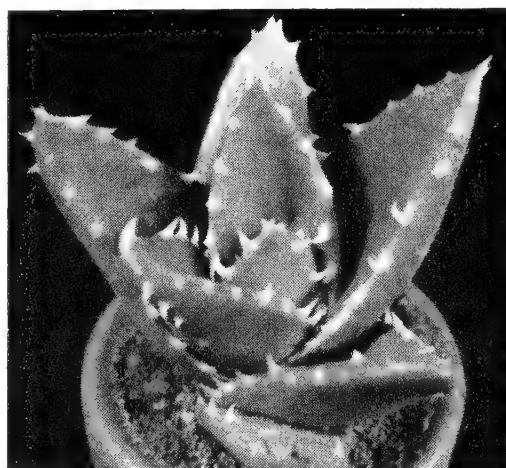


PEARL ALOE

Each leaf is gemmed with tiny seed pearls. *Aloe X Bequini* enjoys a rich porous soil and partial shade, moderate waterings throughout the year. An *Aloe* by *Gasteria* hybrid..... **35c**

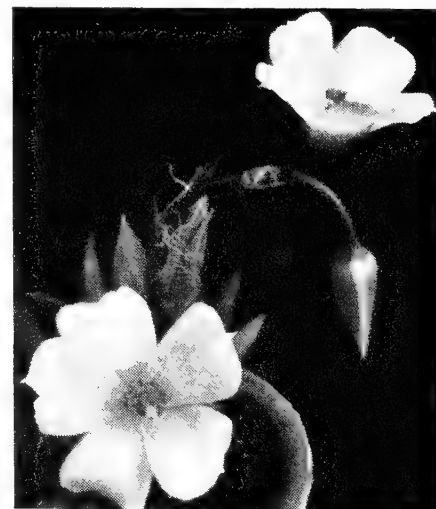
PANDA PLANT

Kalanchoe tomentosa forms beautiful specimen pot plants. Plush-like, blue-grey leaves, margins stained rust-brown. Grows easily. Light situation, rich porous soil, moderate waterings. Most attractive and very popular. Each 35c and..... **25c**



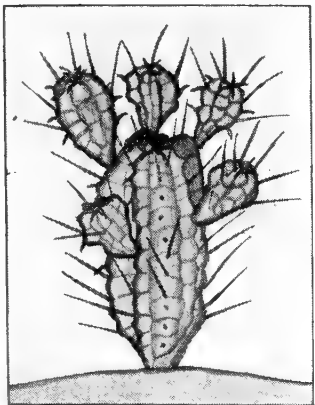
GOLD SPINE ALOE

Aloe nobilis bears its tall spikes of red flowers during the summer. A small growing species 6" in diameter it clusters from the base. Often used for borders. Stands 20°. Aloes have a strong root system and like a fertile soil. Most of them like a sunny position or a very light one. Each, small..... **30c**



LOVE PLANT

Anacampseros lanceolata forms a small rosette of fat, lanceolate, green leaves with numerous bristly hairs in the leaf axils. Flowers large, clear pink like single roses, borne in late summer. They like a rich porous soil, moderate waterings and protection from full sun..... **35c**



FRINGED MILKWORT

Euphorbia fimbriata is a neat, choice plant. The cyathia are purplish red the plant much branched. Each.....

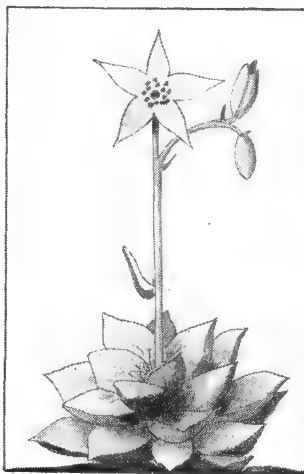
30c



SILVER BEADS

Crassula deltoidea has fat, white powdered leaves and bears trusses of small, pink, urn-shaped flowers in fall. Plant branches freely. Likes a rather poor soil to color best and flower well. Each.....

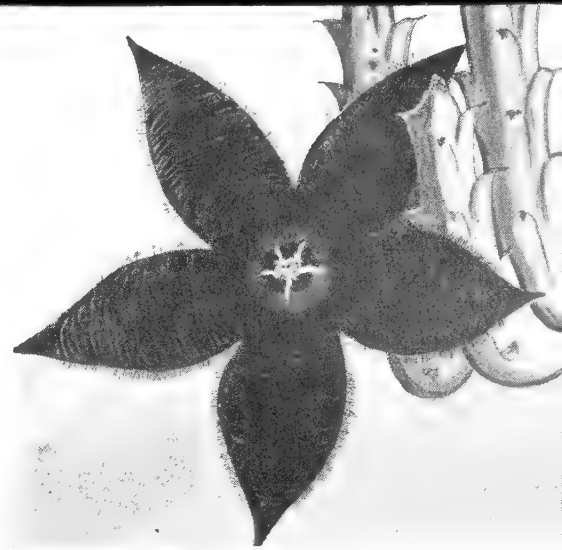
25c



THREAD SAND ROSE

Anacampseros filamentosa bears pretty pink blossoms in autumn. Easy to grow and flowers in a light window. Each.....

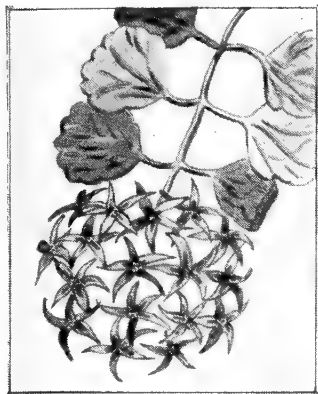
25c



BLACK STARFISH

Stapelia berlinensis bears 3-inch, handsome, purple-black flowers. It is one of the finest in bloom flowering from early summer till late fall. A hybrid of the *S. variegata* group. Use a rich but very porous loam, watering moderately and giving plenty of sun. Plants.....

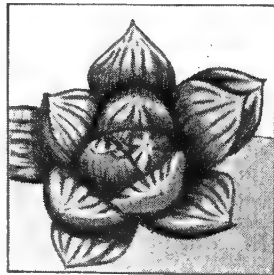
50c



PINK CHAIN

Sedum Sieboldii has pink terminal trusses of flowers and blue-green, round leaves. Plant deciduous and winter hardy in U. S. Does best in the rock garden or in a hanging basket.....

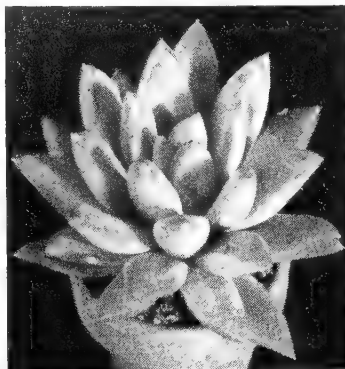
30c



WINDOW PLANT

The truncate leaves of *Haworthia cuspidata* are prettily patterned with lucent panes. The plant is fresh green and grows easily in sandy soil in a light position. Each.....

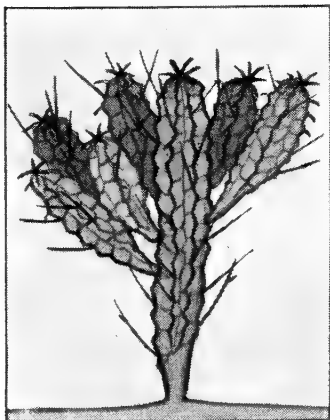
25c



PACHYVERIA GLAUCA

The rosettes of leaves are powdered and mottled blue-grey. It grows easily and makes an attractive specimen. Fallen leaves will grow. Plants of this character will do well in sun or shade. Moderate waterings. Each.....

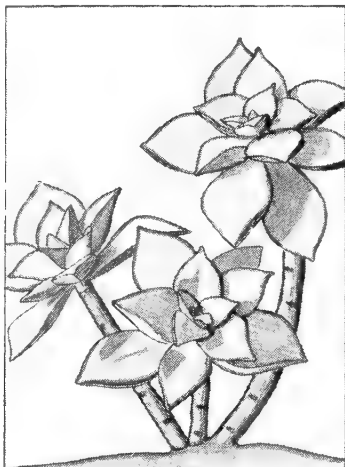
25c



PICKANINNY TOES

Euphorbia submammillaris (E. Pfersdorffii) grows quickly in a porous, rich soil and soon forms a many-branched specimen. Water moderately.....

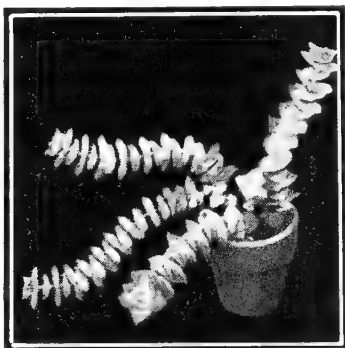
25c



GHOST PLANT

Graptopetalum paraguayense is a splendid plant becoming most graceful with age. As the stems lengthen they droop in pleasing curves. Fallen leaves will grow. Easy to grow in sun or shade.....

25c



NECKLACE VINE

Crassula perfoliata is an old favorite with connate leaves which look like buttons strung on a string. Though it will grow in the shade it is prettiest in full sun. Easily grown. 2 for.....

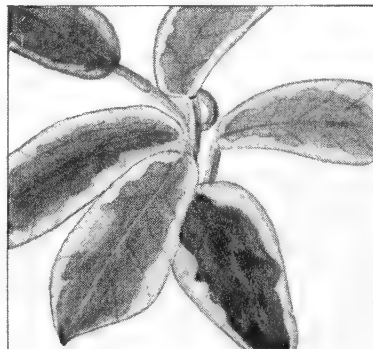
35c



WAX VINE

Hoya carnosae bears lovely, wax-like pink blossoms and shining, dark green leaves. Likes leafmold, moisture and partial shade. From 3" pots.....

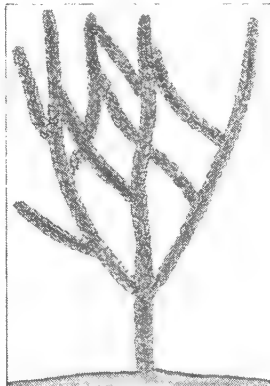
60c



TRICOLOR WAX VINE

A handsomely variegated form of *Hoya carnosae*. The leaves are boldly margined with yellow, often tinged pink. They are much sought after for dish gardens. They grow well in shady locations. Sandy loam with leafmold and liberal waterings. Each.....

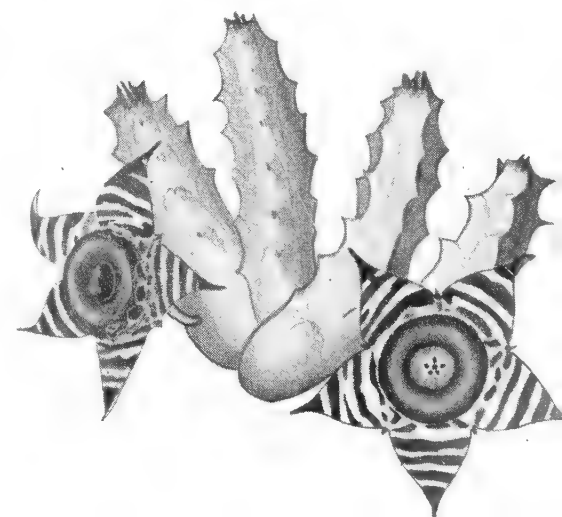
75c



PRINCESS PINE

Every piece of the moss-like *Crassula pseudocypodioides* will grow. Sun or shade. Very pretty. 2 for.....

25c



ZEBRA FLOWER

The lovely *Huernia zebrina* bears striking flowers. The yellow stars are heavily barred with dark red. In the center is a raised, glossy red annulus. Flowers on young growth during the summer. Each.....

45c

Echeveria coccinea. Tall. Scarlet flowers

35c

Echeveria Doris Taylor. Handsome.....

40c

Echeveria elegans. White.....

25c

Echeveria expatriata.....

25c

Echeveria gilva (E. simulans).....

35c

Echeveria kewensis.....

25c

Echeveria microcalyx.....

25c

Echeveria multicaulis.....

30c

Echeveria plumosa (E. leucotricha).....

35c

Echeveria pubescens. Tall.....

35c

Echeveria pulvicarn. Hybrid.....

25c

Echeveria pulvicox. Lovely red leaves.....

25c

Echeveria recurvata. Fine. Tall.....

35c

Echeveria scaphophylla.....

40c

Echeveria secunda hybrida. Red flowered.....

35c

Echeveria setoliver. Handsome flowered.....

25c

Echeveria setosa. Ship in cool weather only.....

40c

Echeveria Spruceana.....

25c

Echeveria Weingartii.....

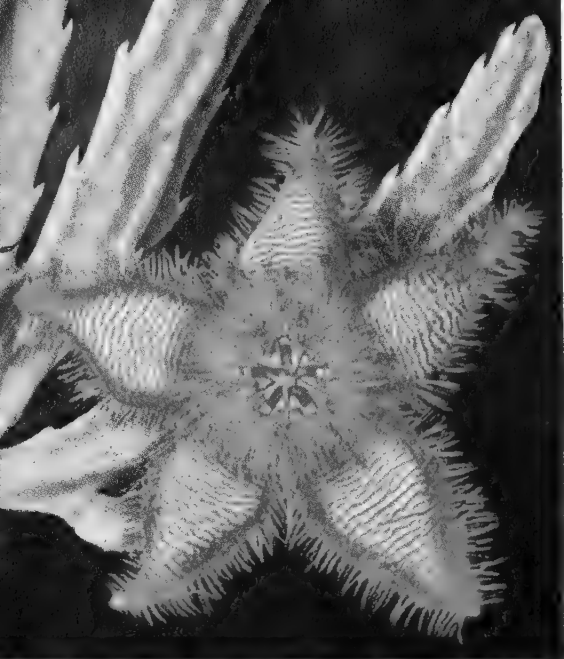
50c

DUDLEYA

A Californian genus near *Echeveria*. Requires same treatment.

Dudleya candida. White powdered, narrow leaved rosettes.....

30c



HAIRY STARFISH FLOWER

This lovely, bright desert star is one of the most fascinating of succulents. *Stapelia hirsuta* blooms freely the first season and is at home in the window garden. The small plants grow easily in a rich but porous soil but should be watered moderately. Keep dry in winter. Flowering season during summer and fall.

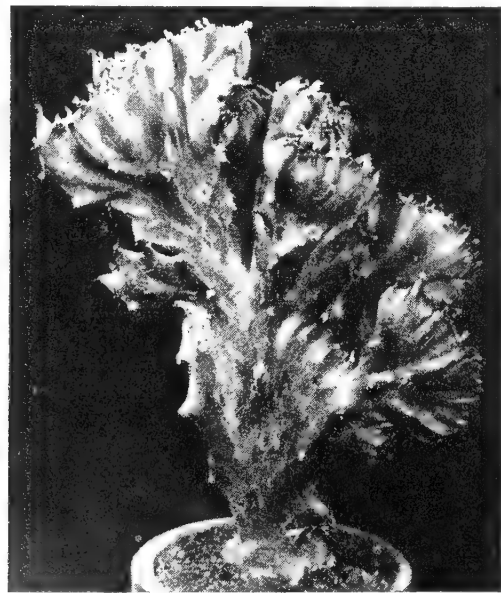
35c

Potted.

STAPELIA

There are about 100 species and varieties of these interesting and beautiful African plants. The flowers range from less than 1" to 18" across thus making it a contender for the world's largest flower. There is an infinite variety in color and shape but all are small plants suitable for small collections. They like a rich but very porous soil and moderate waterings during the summer growing season. They are warm weather plants and should be kept dry and dormant in winter.

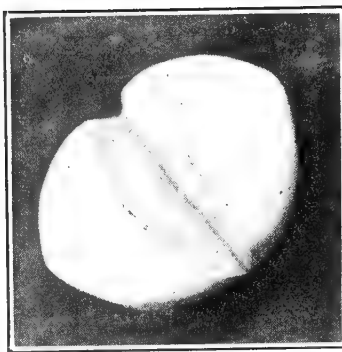
<i>Stapelia ambigua fulva</i> . Purple-brown	50c
<i>Stapelia angulata</i> . Red and yellow	35c
<i>Stapelia asterias lucida</i> . Purple	50c
<i>Stapelia berlinensis</i> . Purple black	50c
<i>Stapelia bella</i>	50c
<i>Stapelia cantabrigensis</i>	50c
<i>Stapelia comparabilis</i>	50c
<i>Stapelia Cooperi</i>	35c
<i>Stapelia deflexa atropurpurea</i>	50c
<i>Stapelia Desmetiana</i> . Large purplish	75c
<i>Stapelia divaricata</i>	35c
<i>Stapelia Dummeri</i> . Yellow flowers	50c
<i>Stapelia Engleriana</i> . Rare	75c
<i>Stapelia flavirostris</i>	50c
<i>Stapelia fulva</i> . Rare	75c
<i>Stapelia Gottleffii</i> . Beautiful	60c
<i>Stapelia gigantea</i> . Giant Starfish	50c
<i>Stapelia gigantea pallida</i>	75c



ELK HORN EUPHORBIA

Euphorbia lactea cristata is a scarce and attractive plant. All collectors treasure these crested varieties. We have only a few plants to offer. They make noble, very intricately crested specimens and with great age reach 3' - 4'. They like a porous, rich soil and a well lighted or partially sunny location. Do not overwater also do not let them go bone-dry for long periods. Growing period in summer.

\$1.50. \$1. 2" - 3" 75c

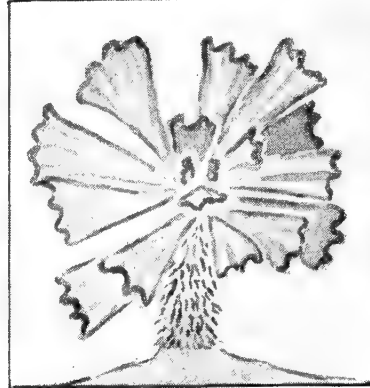


SILVER SKIN

Argyrodema octophylla is a pretty mimicry Stone Plant. Silvery white and bearing yellow or orange-red blossoms. Likes a very light position. Nice specimens

25c

2-3 years old each.



ADROMISCHUS CRISTATUS

A very pretty and scarce species with bright rufous stems and crested leaves. Should be shipped only during cool weather. Each 50c and.

35c

ECHIDNOPSIS

Stapeliads closely related to *Carralluma* from which they differ only in their peculiar, many ribbed, tessellate stems. Arabia and Africa. Culture as in *Stapelia*. Very interesting plants creeping or upright with small red or yellow flowers. Easy to grow.

Echidnopsis cereiformis obscura. Grows upright branching above and below. Flowers murky yellow. Each

50c

Echidnopsis serpens. A creeping species recently described with red flowers. Grows easily. Each

35c



CHRIST THORN

Crown of Thorns or *Euphorbia splendens*. An old favorite with bright red flowers. Every one succeeds with it. In blossom from February to November. Likes a rich, porous soil and generous waterings. In summer a little Cactus Food will keep it blooming indefinitely. Sunny or semi-sunny position. 15", 75c. 8" - 12", 50c. 4" - 6", 35c

Euphorbia Hislopil. Ready 1952. Rich dark red flowers, smaller plant. Each

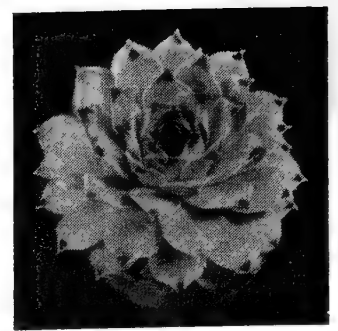
\$1

<i>Stapelia glabricaulis</i>	50c
<i>Stapelia glanduliflora</i>	50c
<i>Stapelia grandiflora</i>	75c
<i>Stapelia hirsuta</i> . Probably hybrids	35c
<i>Stapelia hirsuta unguipetala</i>	50c
<i>Stapelia Leendertziae</i>	50c
<i>Stapelia maculata</i> . Ready 1952	50c
<i>Stapelia maculosoides</i> . 1952	50c
<i>Stapelia margarita</i> . 1952	75c
<i>Stapelia marientalensis</i> . 1952	75c
<i>Stapelia Molonyae</i>	35c
<i>Stapelia mutabilis</i>	50c
<i>Stapelia nobilis</i> . Splendid	50c
<i>Stapelia parvipunctata</i> . Rare	90c
<i>Stapelia Peglerae</i> . Rare	50c
<i>Stapelia Pillansii</i> . Rare	75c
<i>Stapelia Plantii</i> . Rare	60c
<i>Stapelia pulchella</i> . Dwarf	50c
<i>Stapelia pulvinata</i> . Page 45	40c
<i>Stapelia Schinzii</i>	75c
<i>Stapelia semota</i> . Lurid	50c
<i>Stapelia senilis</i> . Rare	75c
<i>Stapelia verrucosa</i> . 1952	50c
<i>Stapelia verrucosa conspicua</i>	50c
<i>Stapelia Wilmannae</i> . Black bells	50c

HUERNIOPSIS

A small genus near *Huernia*, corolla lobes peculiarly excavated above the tube. Flowers open in afternoon. Culture as in *Stapelia*.

<i>Huerniopsis atosanguinea</i>	75c
<i>Huerniopsis decipiens</i>	75c
<i>Huerniopsis papillata</i>	75c



HOUSELEEK

Sempervivum calcareum is a winter hardy plant anywhere in Canada and the U. S. Native to France. The rosettes are very glaucous the leaves tipped red. The flowers are lovely, borne in 4" spikes, pale red, 3/4" across. Do best in the rock garden.

25c

DUVALIA

Stapeliads without close relatives. The outer corona is disk-shaped and surrounded by a small annulus or thickening of the corolla. The petals are often replicate or bent back vertically upon their central median line. Charming plants though the flowers are not very large.

<i>Duvalia Corderoyi</i> . Rare. Lovely	75c
<i>Duvalia elegans namaquana</i>	50c
<i>Duvalia polita</i>	75c
<i>Duvalia radiata obscura</i>	75c
<i>Duvalia reclinata</i> . Pretty	35c

HUERNIA

A large and beautiful genus of Stapeliads easily distinguished by the 10-pointed flowers i.e. 5 petals plus 5 acute points at the sinuses between the petals. Small, clustered stems and very pretty flowers. Culture as in *Stapelia*. Easily grown.

Huernia Hislopil. 75c. *Huernia hystrix*. 35c. *H. keniensis*. 35c. *H. keniensis nairobiensis*. 1952. 50c. *H. Langii*. 50c. *H. Levyi*. 50c. *H. macrocarpa cerasina*. 50c. *H. macrocarpa flavicorona*. 50c. *H. macrocarpa Penzigii*. 50c. *H. macrocarpa Schweinfurthii*. 50c. *H. Pillansii*. 50c. *H. primulina*. 35c. *H. Schneideriana*. 35c. *H. Thureti*. 35c. *H. Vansonii*. 35c. *H. Whitesloani*. 1952. 50c. *H. zebriana*. 45c.

CARALLUMA

This is the basic genus of the tribe Stapeliaceae of which the other genera are segregates. Over 105 species are recognized of which perhaps half have been in cultivation. Intensely interesting plants to the collector. Many are of easy culture others are really difficult. Those listed are of easy culture.

Caralluma avasmontana. 1952. 75c. *C. Baldratii*. Rare 50c. *C. Burchardii* var. *maura*. 40c. *C. hesperidium*. 50c. *C. hottentorum* var. *minor*. 1952. 75c. *C. Keithii*. 50c. *C. Knobelii*. 1952. 75c. *C. lutea*. 1952. 75c. *C. melanantha*. 35c. *C. Nebrownii* var. *intermedia*. 75c. *C. Nebrownii* var. *pseudonebrownii*. 75c. *C. piaranthoides*. 50c. *C. ramosa*. \$1. *C. Rogersii*. 50c. *C. tsumebensis*. 50c.

STAPELIANTHUS

A curious stapeliad from Madagascar with dark maroon stems and odd *Huernia*-like flowers.

Stapelianthus Decaryi. Each

40c

HOODIOPSIS

A monotypic genus with *Hoodia*-like stems and *Stapelia*-like flowers. Quite rare. Each

50c

PIARANTHUS

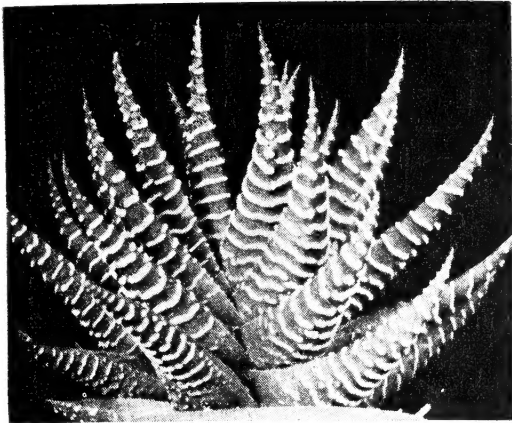
About 15 species of dwarf stapeliads with corona lobes toothed at the back.

Piaranthus foetidus. 35c. *P. foetidus* var. *purpurascens*. 50c. *P. globosus*. 1952. 50c. *P. pallidus*. 1952. 40c. *P. Pillansii*. 35c.



MRS. F. C. SPINKS COLLECTION

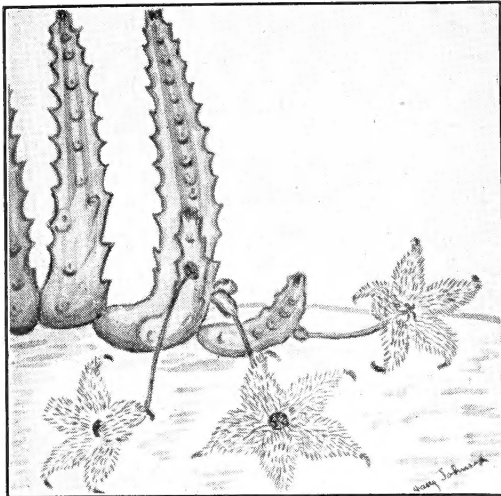
Mrs. Spinks has had much pleasure from her collection and has been quite successful in flowering them. She lives at Roncverte, W. Va.



ZEBRA HAWORTHIA

The charming Haworthia fasciata is a choice small plant of easy culture. Pearly-white, raised lines band the fat, pointed leaves. All the Haworthias like a quite sandy soil with some leafmold or a good porous loam, a light position and moderate waterings. Each.....

35c



SNOWFLAKE STAPELIA

Stapelia glanduliflora is a small, compact plant the flowers as delicately molded as a snowflake. Each is clothed with white hairs. The flower stalks bear several which lie upon the ground. Flowering size.....

50c

PECTINARIA

An odd stapeliad the tips of the petals joined.

Pectinaria arcuata. Very rare species.....

50c

PEDILANTHUS

Bears red, showy cyathia. Pencil-like stems and caducous leaves. Easy culture.

Pedilanthus macrocarpus. Showy flowers. White stems.....

\$1.00

Pedilanthus tithymaloides variegatus. Fine. 1952.....

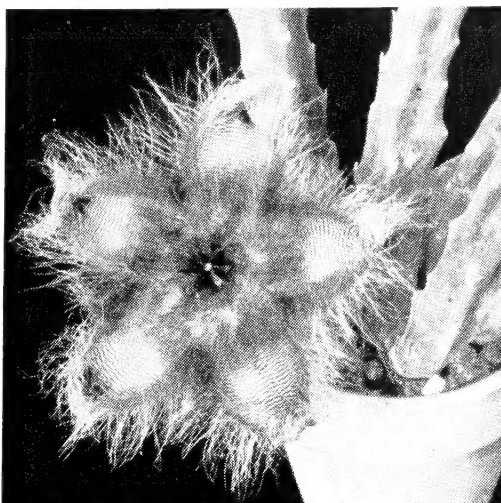
40c

SYNADENIUM

Shrubby Euphorbiads with large leaves.

Synadenium Grantii.....

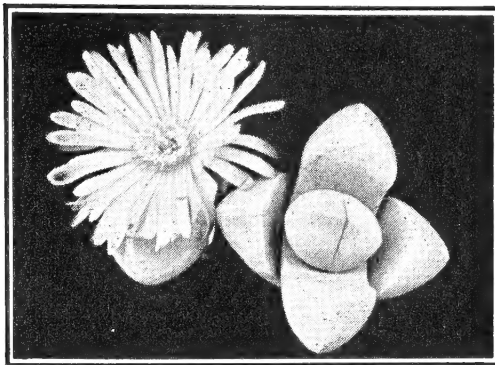
\$1



BEARDED STAR FLOWER

An exquisite, almost scentless blossom. *Stapelia pulvinata* is heavily bearded with white and rosy-purple hairs. The margins of the petals are fringed with long hairs the pulvinata center is covered with soft, rosy-purple, woolly hairs. Very free bloomer. Each.....

40c



KARROO ROSE

Lapidaria Margaretae is one of the prettiest of the mimicry Stone Plants with white leaves suffused with smoky rose and in the winter sunshine dyed with rose-red at the base. Flowers large of a lively golden yellow. Treat as for

25c

Lithops. Each.....

RHOEO DISCOLOR

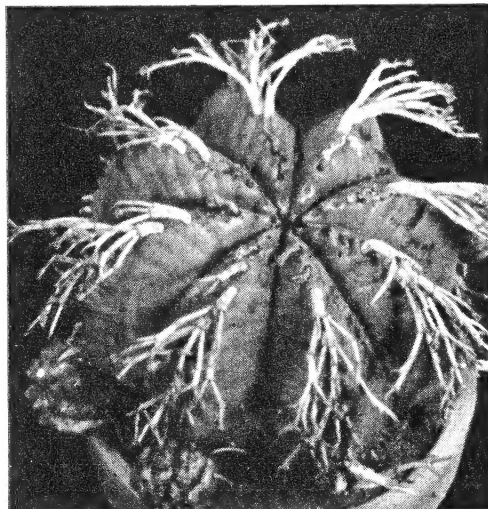
Commonly called "Moses in the Cradle" this Tradescantiad has long, lanceolate leaves green above, purple below, the white flowers borne in cradle-shaped bracts. Likes water and a rich open soil.....

75c

FRITHIA PULCHRA

A rare Mesemb "window plant" somewhat similar to *Fenestraria* but with lovely, purple-pink blossoms with a white throat. The leaves are truncate with windowed tips even the sepals having windows. The plants form small, branched rosettes and bloom remarkably freely in the late summer the lively color of the blossoms being most attractive. Use a quite sandy soil watering only moderately and resting as in *Fenestraria*. Not difficult. 1952. Each.....

\$1.50

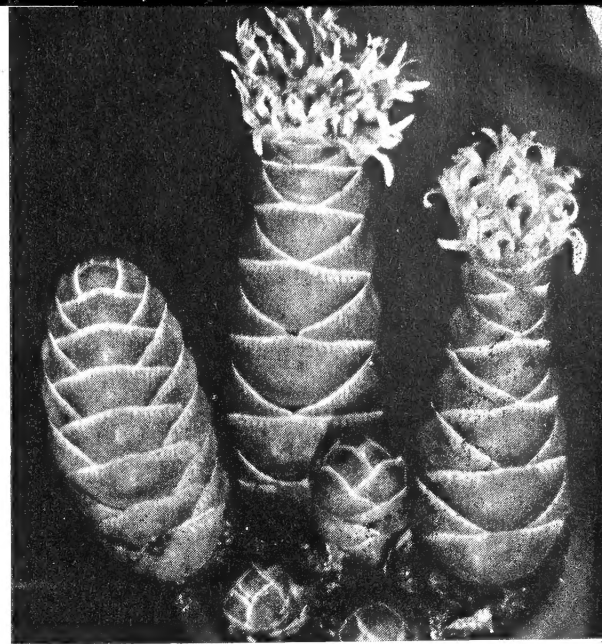


EUPHORBIA MELOFORMIS

A scarce succulent from South Africa. Our type tends to form pretty, many-headed clusters. A choice collector's item. Easily grown in a fertile, porous loam with moderate waterings.

50c

Each 75c and.....



RATTLESNAKE CRASSULA

The rare *Crassula teres* is seldom seen except in choice collections. It branches freely from the base, each stem eventually terminating in a cluster of fragrant, white blossoms. Grows slowly liking a light porous soil, semi-sun, moderate waterings. Not hard to grow. Nice, beginning to cluster.....

35c

EUPHORBIA

More than 300 species of this vast genus are of succulent habit and potential collectors' items. Probably almost this number have been in collections at various times. It is always surprising to learn the number of species a diligent fancier can bring together of this or any other genus. They like a porous but rich soil. Clay soils, except in the hands of the expert, are far too water retentive. To be safe water moderately only when dry. Sunny or very light position and good ventilation.

<i>Euphorbia acurensis</i>	50c
<i>Euphorbia alcornis</i> . Tip. cuttings.....	\$1.00
<i>Euphorbia atrispina</i>	75c
<i>Euphorbia Barteri</i> . Nigeria.....	\$1.00
<i>Euphorbia claudetina</i>	80c
<i>Euphorbia canariensis</i> 5" - 8".....	75c
<i>Euphorbia echinus</i>	35c
<i>Euphorbia ferox</i>	50c
<i>Euphorbia ferox</i> . Yellow spined.....	75c
<i>Euphorbia Frankiana</i>	50c
<i>Euphorbia fruticosa</i>	75c
<i>Euphorbia globosa</i>	50c
<i>Euphorbia hamata</i>	\$1.00
<i>Euphorbia horrida</i>	75c
<i>Euphorbia horrida</i> x <i>obesa</i>	50c
<i>Euphorbia jansenvillensis</i>	\$1.00
<i>Euphorbia loricata</i> . Type No. 2.....	75c
<i>Euphorbia Ledenii</i>	75c
<i>Euphorbia Ledenii</i> var. <i>Dregei</i>	\$1.00
<i>Euphorbia lignosa</i>	75c
<i>Euphorbia magador</i>	50c
<i>Euphorbia Morinii</i> . Nice.....	35c
<i>Euphorbia officinarum</i>	50c
<i>Euphorbia pseudocactus</i>	35c
<i>Euphorbia pseudoglobosa</i>	35c
<i>Euphorbia pteroneura</i>	35c
<i>Euphorbia resinifera</i> . Blue grey.....	35c
<i>Euphorbia Royleana</i>	\$1.00
<i>Euphorbia squarrosa</i>	50c
<i>Euphorbia Susannae</i>	75c
<i>Euphorbia tubiglans</i>	50c
<i>Euphorbia xylophyloides</i> . Tips.....	\$1.00



ECHEVERIA KEWENSIS

The Mexican *Echeverias* like partial shade and thrive in the window garden. This one has white leaves often with a pink flush. Flowers on tall spikes.

25c

orange-red. Each.....

TONGUE LEAF

Glottiphyllum linguiforme has bright green, soft, succulent, long leaves and yellow flowers.....

25c

PUSSY EARS

Cyanotis somaliensis has purple flowers and silky white-haired leaves. A Tradescantiad.....

25c

LAMB'S TONGUE

Agnirictus agninus with white, tongue-shaped, thick leaves and yellow flowers.

25c

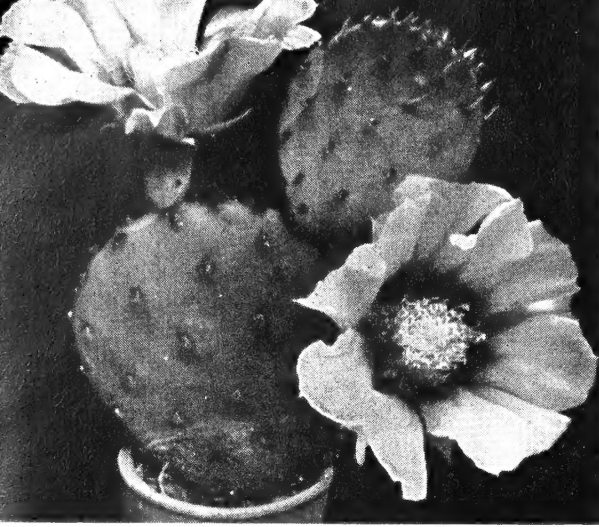
Each.....

AMBER STARS

Huernia hystrix has heavily papillose flowers more yellow than red. Each.....

35c

OPUNTIAS



DOLLAR CACTUS

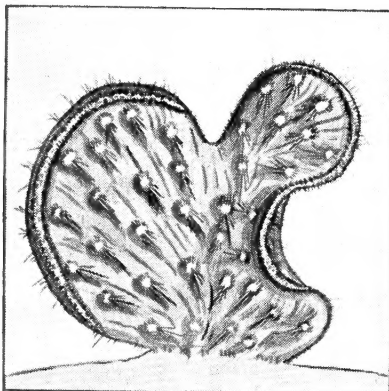
Opuntia santa-rita has circular, blue powdered pads and really handsome yellow blossoms with a reddish eye. It grows well and flowers freely. Makes an attractive silhouette. The species is native to south-eastern Arizona. If in a very sunny location give a rich soil. Each.....

35c

OPUNTIA

The basic genus of the tribe from which several of the other genera are segregates with no real differences of primary taxonomic importance. Each botanist who has monographed them has his personal way of splitting the genus into subgenera and series and none have ever agreed. For convenience we follow Britton & Rose but split off *Tephrocactus* and *Consolea* for catalog purposes only. The round stemmed ones are called *Cylindropuntia*, flat stemmed *Platyopuntia*.

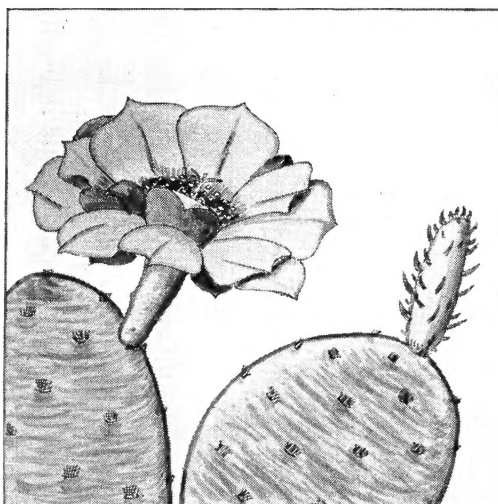
- Opuntia aciculata*. 6" - 8" pads.....75c
- Opuntia basilaris*. Coastal form. Page 27 35c
- Opuntia basilaris alba*. Pale green.....35c
- Opuntia brasiliensis*. Tree-like.....35c
- Opuntia brasiliensis peruviana*. Dwarf.....50c
- Opuntia bulbispina*. Dwarf.....35c



CRESTED OPUNTIA

Opuntia serpentina cristata is one of the best of the crested forms. The stems are thin and very undulate and seldom or never revert to single stems. Grows easily and quickly.

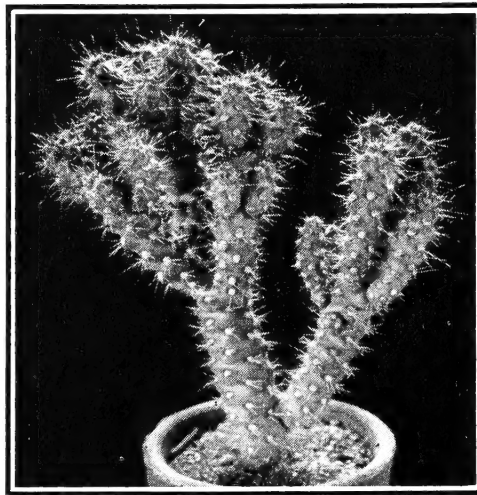
35c



GOLDEN TUNA

Opuntia grandiflora is a fine east Texas species almost spineless and of moderate growth. Flowers up to 5" bright yellow with a red eye. It blossoms very freely and should prove fairly hardy. A quick and easy growing species. You will enjoy this good plant.....

35c



DWARF TREE OPUNTIA

Opuntia villosa (there is a question as to the determination though long in the trade) is a well-branched tiny tree some 4" tall. When allowed to develop it forms a mat. This charming Mexican species is particularly liked because of its distinct tree-like growth. Likes a sandy, poor soil and a light or sunny place.....

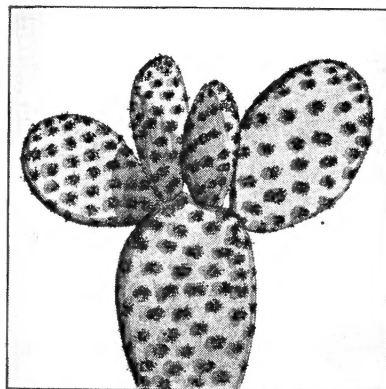
25c

- Opuntia Ficus-indica*. The fruit and cattle fodder producing species. Pads.....\$1
- Opuntia fragilis*. Winter hardy anywhere. Flowers yellow.....25c
- Opuntia leptocaulis*. Long, yellow-sheathed spines 40c
- Opuntia Moelleri*. Round, short joints.....35c
- Opuntia opuntia*. 1952. Hardy.....40c
- Opuntia pailiana*. Rare but scars badly.....40c
- Opuntia rhodantha*. 1952. Hardy. Red flowers.....50c
- Opuntia ramosissima*.....40c
- Opuntia Schickendantzii*.....25c
- Opuntia tomentosa*. Spineless tree type. Fine.....35c

TEPHROCACTUS

A group of 1 to few-jointed, round stemmed, South American opuntias of rather distinctive appearance. They are mountain species found in Peru, Chile, Bolivia and Argentina. *T. floccosa* which is covered with woolly white hair grows as high as 13,500' or more in the Andes looking like patches of snow.

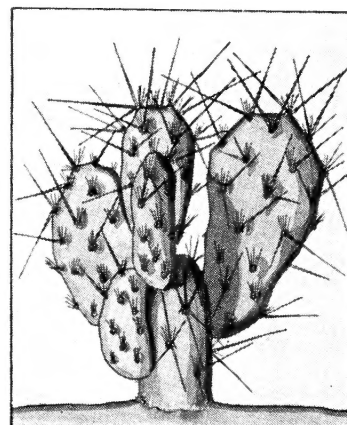
- Tephrocactus glomeratus* (diadematus in part) Paper Spined Opuntia. Page 29.....
- Tephrocactus Pentlandii*. Spined type.....50c
- Tephrocactus Pentlandii nudus*. Unarmed.....40c
- Tephrocactus strobiliformis*. Page 47.....
- Tephrocactus Turpinii*.....75c



CINNAMON CACTUS

Opuntia rufida bears cinnamon-brown glochids. Nursery grown plants are small with many "ears" and are much used in dish gardens. In warm regions the plant attains 5'. Each.....

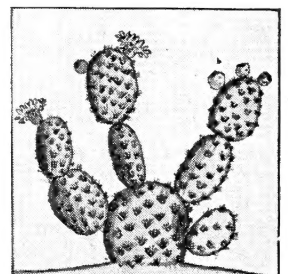
25c



FAIRY NEEDLES

Opuntia Soehrensii is the "ayram-po" of Peru the dried seeds are used to color wine or food red. A very dwarf plant hugging the ground. Spines bright yellow. Each.....

35c



ANCORA BUNNY EARS

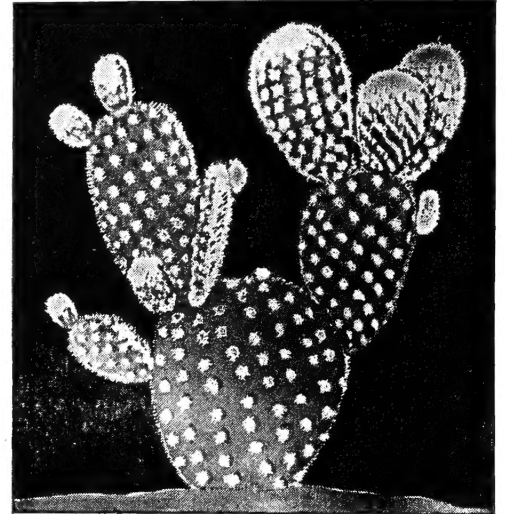
Opuntia microdasys albescent a variety with harmless white glochids. A pretty plant with small ears branching freely. Light soil, moderate waterings, sunny situation.....

25c

HONEY TUNA

Opuntia microdasys var. Another variation with pretty honey-colored glochids. In pots they remain quite dwarf, perfect miniatures of large specimens.....

25c



ANGEL WINGS

Opuntia microdasys albata is a lovely dainty little plant the areoles filled with cottony white glochids. Completely spineless the glochids do not stick! It branches freely and remains dwarf the pure white cushions showing brightly against the dark green pads. Sandy soil, moderate waterings and light position.....

25c

CONSOLEA

Tree-like with round trunks when mature.

- Consolea falcata*. A tall spiny species.....35c
- CONSOLEA RUBESCENS*. A handsome, spineless species with dark bronze colored pads which continue to grow in length. Each.....40c

QUIABENTIA

A small tree-like South American genus near *Opuntia* though the species were first in *Pereskia* to which they are not closely related. Flowers borne on ends of branchlets the ovary invaginated in the tip bearing leaves and areoles, rotate, bright red. Leaves large and thick, spines acicular, glochids said to be present. *Quiabentia chacoensis*.....

75c

NOPALEA

All but one of the 8 species are tree-like with distinct trunks and rather long narrow pads. They differ from *Opuntia* only in the erect petals and the exerted stamens though the plants have a character all their own.

Nopalea Auberi. Pretty, light red flowers.....40c

TACINGA

A curious Brazilian plant near *Opuntia* but differing in the recurved petals and in the row of hairs between the stamens and petals. The stamens are longer than the petals and erect as in *Nopalea*. The plant is slender, whip-like, the areoles with caducous glochids. Clambering. *Tacinga funalis*.....

\$1

or PRICKLY PEARS

Magellan. They have become naturalized in the Old World and became an appalling pest in Australia. In Italy and Mexico the fruits are sold in the markets. Some 20 carloads a year are shipped from California to eastern Italian markets. The young succulent pads of the spineless platyopuntias can be used as a vegetable by slicing into slivers and serving as for string beans. The woody steles of old trunks are called "lace wood" and made into novelty furniture, table lamps, etc. Many have exquisite flowers with silken petals of brilliant colors. Nothing could be lovelier than a colony of *Opuntia littoralis* whose flowers range from yellow to bright red or the Beaver Tail whose ethereal blossoms grace our harshest desert slopes. Some flower freely in cultivation others seldom flower even in the wilds but depend upon their spiny, easily detached branchlets for survival.

Most species are of the easiest culture growing in poor or rich soils in full sun or part shade. To keep them at their best however a reasonably poor sandy soil is recommended with moderate waterings and a sunny position. Indoors in shade or in rich soil they grow so rampantly they soon lose their character and send out long, snake-like branches.



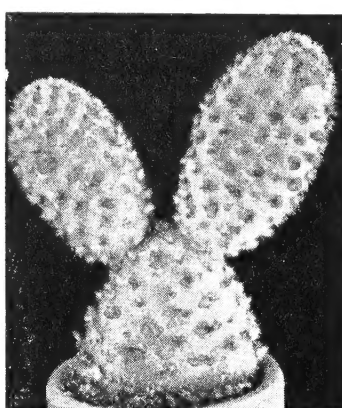
LEMON VINE

Though a true cactus few would at first suspect it. *Pereskia pereskia* (P. aculeata) has large leaves and waxy, lemon scented, creamy blossoms. It grows as a clambering vine at first with prickles later with very long acicular spines. In shipping it may drop its leaves..... **30c**



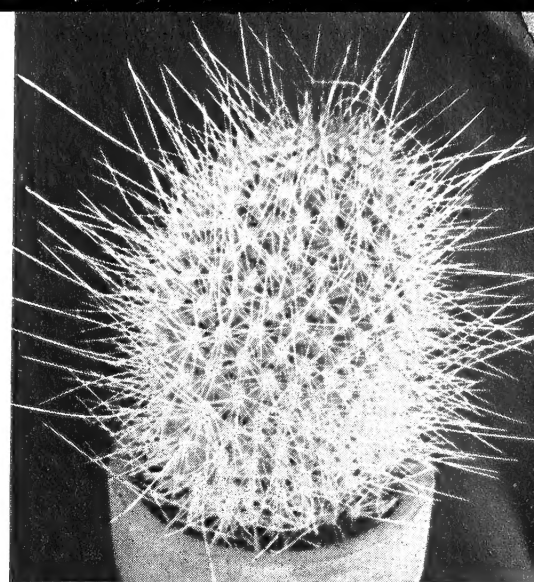
OLD MAN OPUNTIA

Opuntia vestita is a white-haired Bolivian species bearing leaves in the spring and developing the hair more abundantly after the leaves fall when it should be kept drier. Sandy soil. Each..... **30c**



BUNNY EARS

Opuntia microdasys has long been a favorite. A Mexican species whose glochids assume their very brightest golden coloring and luxuriance in the full sun. They remain dwarf in pots. Each..... **25c**

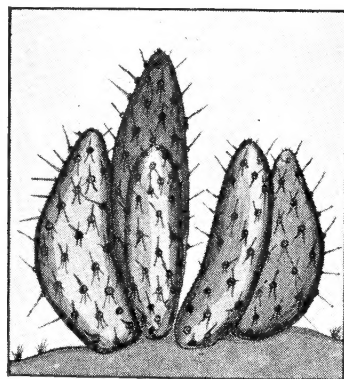


GRIZZLY BEAR

Opuntia erinacea forma ursina. A white or whitish yellow-spined plant with yellow flowers. The spines are hair-like, flexible and have been recorded to 12" long. It varies greatly in different localities..... **35c**

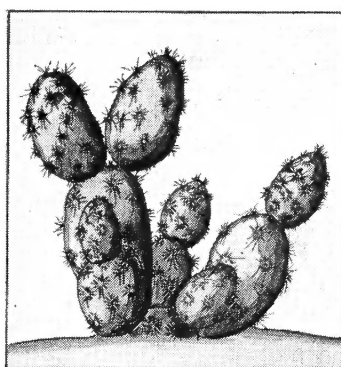
MAIHUENIA

An anomalous genus placed by Britton & Rose in *Opuntieae*. Many authors place it in *Pereskieae* but since the flowers are not stalked and one species has glochids (placed in a new genus *Maihueniopsis*) it seems rather strange to strain the seams of *Pereskieae* to receive it. It would seem the lack of glochids is a reduction and not primitive. Small, Chilean, low, branched plants with fat, persistent leaves, spines and yellow or red, rotate flowers. *Maihuenia Poeppigii*..... **\$1**



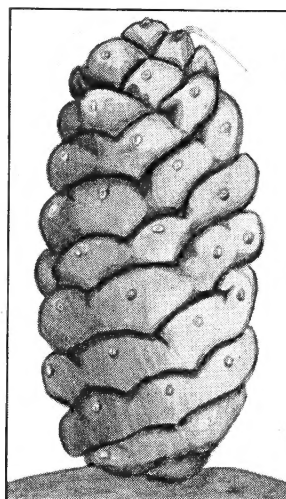
DOMINOES

Opuntia erectocladia is a dwarf Argentinian species with trapeziform pads and brown spines. It forms neat, small clusters each pad with the ventral edge facing the parent pad. It likes a fertile sandy soil and a light or sunny position. Each..... **25c**



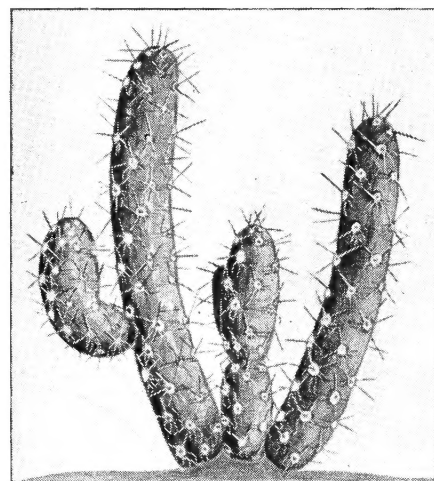
THIMBLE TUNA

Tephrocactus sphaericus is an interesting tiny species with ovoid branches forming dense clusters. Flowers are deep ruby-red. It does not check with this species fully and may be one of Backeberg's new species. Without herbarium comparison one can only form an opinion..... **35c**



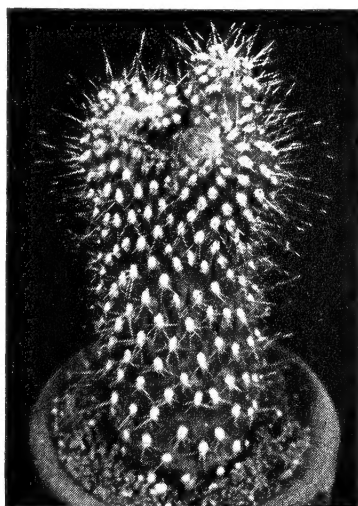
SPRUCE CONES

Tephrocactus strobiliformis has blue-grey, smooth branches from 3" - 6" long but bears an occasional papery spine at the tip. From Argentina. It may become much wrinkled when resting. Culture as for the Paper Spine giving full sun. Each..... **35c**



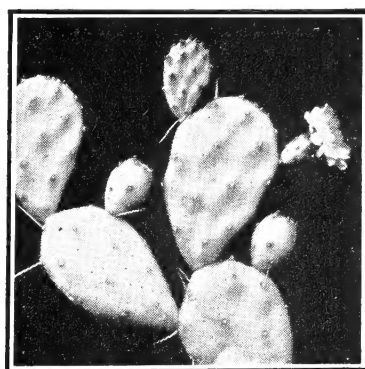
OPUNTIA TERES. CELS.

Young growth has quite long leaves which drop as the resting period approaches. A Bolivian species with garnet-red flowers..... **30c**



BOXING GLOVE

A form of *Opuntia mamillata* (O. fulgida) with branches which become hollow and split at the tips into crests. Every branch will do this. The common name is easily understood..... **30c**



ORANGE TUNA

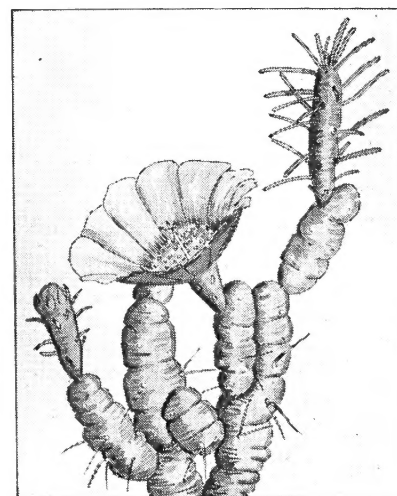
A form of *Opuntia elata*. The pads are spineless or nearly so growing upright branching into a bushy head. Flowers are large, bright orange freely borne. With age the plant forms a trunk. A native of Paraguay. Each..... **30c**

OPUNTIA ELATA MARMORATA. A form with oblong pads more brightly marked light and dark green. Pretty. Each..... **25c**



OPUNTIA MOELLERI

A species from Coahuila, Mexico with short, obovate joints and whitish spines. Forms nice clusters 2-3 joints high. Flowers reportedly yellow. Grows readily with moderate waterings..... **35c**



OPUNTIA VERSCHAFFELTII

A pretty Bolivian species forming tiny, tree-like specimens. Leaves caducous, flowers dark red. An interesting plant. Each..... **35c**

THE GROWING OF CACTI—Continued from page 3

greater in diameter than the plant. A one inch plant in a 2" or 2 1/4" pot. A 2" plant in a 3" pot etc. For very large plants a pot of the same diameter may suffice. If the plant is taller than wide a 2" or 3" plant in a 2 1/2" pot, a 6" plant in a 3" or 4" pot, a 12" plant in a 5" or 6" pot. It is best not to over-pot unless you are very careful not to overwater. Remember the smaller the pot the greater the ratio of surface to contents and thus the more air diffusion. The question is often asked about glazed pots versus unglazed. For growth the unglazed pot is best for it is porous. However all the colorful and uniquely shaped containers are glazed and they have proven perfectly satisfactory to millions of house plant growers. The point is only for the expert.

In preparing a plant for potting see that any large broken roots are cut with a pair of scissors or sharp knife. If the pot has a hole in the bottom place a piece of broken pot over the hole. If larger than a 4" pot some drainage is helpful, pieces of broken pots or coarse gravel covered over with moss or a piece of sacking. Pour in some soil and then spread the roots out toward the side of the pot. Pour in more soil working it under the plant unless the plant has a tap root. Tap the pot on the table then add more soil keeping the roots reasonably spread. Keep the base of the plant about flush with the finished surface which in a 3" pot should be about 1/2" below the top to allow for watering. Don't bury the base unless you are sure you know why you are doing it. If the pot is large you will need a blunt stick to firm the soil as you fill the pot. Don't ram the soil in too hard. Just firmly. When finished firm the soil with your two thumbs and tap the pot smartly two or three times on the table to settle it.

Most ornamental pottery does not have a hole in the bottom and I am often asked, "Can I use such a pot?" Most assuredly, yes. Millions of them are used. However be careful never to overwater. Just give enough so they will dry in a week. Remember you are dealing with plants whose home lands are dry. A Philodendron or an African Violet can stand the water better than a Cactus but they will suffer from lack of water and a Cactus will not.

WATERING

I am often asked "When and how should I water my plants?" It can be answered quite simply, "Water when the soil is dry." I try to water just enough so that the soil is dry in 4 to 7 days. If the weather is cool and moist they may remain moist for two or three weeks. If they have plenty of ventilation the moisture seldom hurts them. If they are in a closed warm room overwatering may cause them to rot. If the atmosphere is very dry or if they are in full sun one may have to water more often. If you live where the summers are hot and moist your plants will need far less water. In moist, muggy weather it is best to err on the side of dryness. In such weather plants lose but little water by transpiration and consequently are practically drowned when overwatered.

Many growers think that getting water on a plant is harmful so they soak the pots in pans. I always water from the top because soaking generally insures overwatering. If the plants are in small pots crowded with roots soaking may not harm them but if newly planted or in wet weather it is a fine way to make room for new purchases.

If the plants are wetted in watering see that there is a circulation of air around them so the plant body will dry before night. Wet plants may rot quickly if not dried. Just remember to open the window or ventilator a trifle after watering.

The roots of cacti and succulents need plenty of air. This is provided in good culture by a sandy soil with coarse leafmold. Charcoal is helpful in many cases. Overwatering reduces

the amount of air in the soil, the root hairs drown and decay may set in. Therefore don't saturate the soil but water enough to keep the plants plump. When they are growing they can safely take a little more.

Though cacti come from regions whose climatic conditions vary greatly yet I have found they will thrive with practically the same care for all. There are a few exceptions to this general rule. However even then they grow here side by side receiving but slight variations in treatment. Some we give a sandier soil, often just sand and leafmold, a position closer to the glass or less shade and a little less water though perhaps as frequently.

Overwatering rapidly changes the texture of the soil. This is often overlooked but really is very important. One of the obvious results is a crust on the surface. This slows the growth of the plants down quickly probably because it prevents a free diffusion of the air. The soil compost becomes closer textured, it settles and the air filled interstices between the grains become smaller. I have brought in wonderfully textured soils from our desert mountains where plants have appeared very happy and in a few months have found the texture very different. The warmth and moisture of cultivation soon broke them down.

Though all this may seem to the beginner as very complicated it really is not if this primary advice is even reasonably followed:
Water only when plants are dry.

HOW DO I TELL WHEN My Plants Are Dry?

This is really quite easy to determine. Scratch the surface with a match or pencil a quarter inch to a half inch deep. If moisture shows they don't need watering. During the growing season I try to catch them just as the moisture leaves the deeper scratches—a half inch or so. A little practice will enable you to judge pretty accurately when this should occur. The time will vary somewhat with the type of soil, situation, ventilation and humidity. However try to equalize these factors so it happens in about a week. Young plants need more attention than old established specimens which may go weeks without water. Very young seedlings before their first transplanting should be kept quite moist at all times. Never water newly planted plants heavily. Go easy on water for one to two or more months until the new roots are well established. You are bound to break roots in repotting and these should heal on the dry side. Wetness may cause rotting.

RESTING PLANTS

PLANTS, like animals require a resting period. Even in the tropics rains are seasonal. In most cases the sunless winter months of our northern regions are the best months to rest plants. At this time, due to lack of light and the difficulty of ventilation, any growth is quite liable to be etiolated and "drawn."

Most of us have our plants in the window so "resting" may consist only of giving our plants less moisture. Enough water to keep them from drying up or withering but not enough to force growth. Give them as much fresh air as you can and as much light as possible. Don't allow temperatures to go below freezing. Start giving less water in September or October. Growth should be stopped by October. Let them rest until there is plenty of light in March or even April. There is no rush about getting them started. If flower buds show before this you may water a little more or they will blast.

If you have a light window in a frost proof cellar your plants can be set near it. Since the cellar is cooler and the air more moist the

plants will probably be in a better flowering condition in the spring. If you have a greenhouse put the plants in a light position and water only when they show signs of shriveling. Temperatures down as low as 33° will not hurt them. However I would try to keep temperatures at above 40°.

If you live in warm regions where oranges succeed you will find a great many of your plants will thrive outdoors. Whole groups of them will stand temperatures of 25°, a great many 20°, some even 10°. I have found that this long, cold, outdoor rest really brings the flowers on. The natural dampness from the rains, if the drainage is good, does not seem to rot them.

In the wild state the plants are forced to rest due either to the dry season or to the cold of winter. Seldom does the growing season actually extend over 3 or 4 months. Often, due to lack of rains, a plant will make only 2 or 3 new areoles in a year some years missing entirely. Thus you see that Cacti are not fast growers. Don't try to get too much growth out of them after they reach flowering size. Young plants can be kept growing much longer than specimens. In fact the first year we keep them growing slowly almost through the year. After they have had a rest period it should be observed as they are "set in their ways."

PROPAGATING

Cacti and succulents may be raised from cuttings, leaf cuttings, offsets and seeds. A great many cacti are best raised from seeds as they seldom offset or produce suitable cuttings. Others branch freely or offset. The *Dolichotheles* can be raised from nipples. Some succulents as *Echeverias*, *Pachyphytums* and *Haworthias* are easily raised from leaves. Some, like various *Kalanchoes*, produce a myriad small plants on the older leaves.

Seed growing is very interesting though a tedious, time consuming process. It may be sown in boxes, pans or pots. Some cactus and succulent seed should be sown on the surface and not covered with soil. The larger seeds should be pressed down with a flat board and clean sand (with the dust sifted out) sprinkled over them to a depth not exceeding an eighth of an inch. Cover with a pane of glass and soak the pans etc., in a pan of water until the moisture shows on the surface. Keep wet until well sprouted. The seed may come up in 4 or 5 days or it may be a month. Much depends on the time of year and temperature. 70° to 75° is a good germinating temperature to maintain at night.

Cuttings of cacti should be allowed to dry in an airy place for two weeks to a month or so. The larger the cut surface the longer it must dry. Sand with a little leafmold is the best rooting medium. Cuttings with a large cut surface should be only set on the sand. If buried they often rot. They should have plenty of ventilation while rooting. The amount of moisture needed to root cuttings is very variable. The shade or jungle cacti *Selenicereus*, *Epiphyllum*, *Zygocactus*, etc., should be dampened, not soaked, regularly. Desert cacti as *Cereus*, *Mamillaria*, *Echinocereus*, etc., do not need much water to show roots. Roots may show in two weeks to several months.

Leaf cuttings may be laid on dry sand and put in a shady place where roots will show. They may also be set shallowly in sand. Eventually sprouts may show at the base. Many *Crassulaceae* and *Haworthias* root readily. Many others do not.

Offsets, like leaf cuttings, are Nature's own way of asexual propagation and often show roots while still attached to the mother plant. They need only be set in soil and watered. Some *Lobivias*, *Gymnocyalyciums*, *Mamillarias*, *Echinopsis*, etc., produce offsets.

JOHNSON CACTUS GARDENS
PARAMOUNT, CALIFORNIA